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A PROBLEM IN PHONOLOGICAL ALTERNATION

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One may expect to find instances of phonologic (morpho-phonemic) alternation in almost any language. In English there are changes in consonants, vowels, and stress, insertions, and elisions;[1] and many of these are conditioned only by the phonetic surroundings of the morphemes. An example is the possessive suffix, which is *-əz* (or *-ɪz*) after a sibilant, *-z* after a voiced non-sibilant, *-s* after a voiceless non-sibilant.

In the case cited, the alternation is called regular. It might be more correct to say that the phonologic[2] basis for the alternation is patent, as we may demonstrate by contrasting with this example another one involving 'irregularities'. The plural suffix, otherwise homonymous with the possessive, differs in the case of certain nouns, whose final fricative is voiced.[3] Thus, *leaf* : *leaves* contrasts with *belief* : *beliefs* (note also *leave* 'furlough' : plural *leaves*). An account of plural formation in English may consist of giving the more usual phonology as the rule and then listing the other cases as irregularities. But note the plural formation of *leaf* is completely consistent with that of *sheaf*, *calf*, *half*, *knife*, *house*, and several other nouns. There is, so to speak, regularity within this limited group of 'irregular' words. These cases

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[1] See Palmer, A Grammar of Spoken English 7–12, Heffer, 1924; Bloomfield, The Structure of Learned Words, Institute for Research in English Teaching 1938, 17–23.

[2] We use the term phonology to refer to alternations (synchronic phonology) or changes (historical, diachronic phonology) in sounds, rather than for the theory of the nature and permutations of the sounds. The latter we call phonemics. Those who use 'phonology' in this sense, probably in imitation of French phonologie, deprive themselves of a convenient means of distinguishing two fundamentally distinct subjects.

The phonemic point of view is essential to a proper understanding of the phonology, both synchronic, as will be seen in this paper, and historical, as is nicely shown in F. W. Twaddell's A Note on OHG Umlaut, Monatshefte 30: 177 ff.

[3] We omit mention of the irregularity that certain stems use a different formation, as *oxen*, *men*, *children*.

cease to be irregular if one recognizes that there are two types of voiceless spirant morpho-phonemes, one that is fixed, and one that is subject to voicing on the addition of the plural suffix.   If we wish, we may provide different symbols for the two types of morphophonemes, as, for example, *bɔlif versus *liғ.   Different phonologic behavior requires the differentiation of the morphophonemes.

A system of special morphophonemic symbols would have little operational efficiency in English, because the instances of non-patent phonology are limited in number and scope.   In other cases, one of which we give here in full, the use of special symbols may greatly clarify and objectify an otherwise complicated system of alternations.   Before we leave the English examples, let us note that alternations are the result of phonetic history, affected also by foreign borrowings and analogical changes.   The most efficient formulation of the synchronic facts is ordinarily not the same as a reconstruction of the actual historical developments, but the process of constructing morpho-phonemic formulae has some resemblance to that of historico-phonological reconstruction.[4]

We give Tübatulabal, a Uto-Aztecan language of California, as a striking illustration of what may be accomplished by recognizing the non-patent in synchronic phonology.   In his published account of this language, Voegelin reported a technique of vocalic reduplication accompanied by consonantic changes, contractions, syncopes, and changes in vowel length.   For these changes two or three highly productive treatments could be pointed out ('regular principles'), but there remained many less productive treatments ('irregularities').   Again, alternation of length in suffix vowels followed a highly productive treatment, but so many unproductive treatments of stem phonology were found beside this that the only feasible plan seemed to be to list the reduplicated and unreduplicated forms of each stem.[4]   Swadesh, having learned the use of formulae in synchronic phonology from Sapir in his work on Nootka,[5] suggested that the morpho-phonemic alternations of Tübatulabal might be effectively treated by this method.   In the beginning of our collaboration, Swadesh suggested some hypotheses

[4] Voegelin, Tübatulabal Grammar, University of California Publications in American Archaeology and Ethnology 34.55ff. See also Voegelin, On Being Unhistorical, Am. Anthropologist 38.344–50; and Whorf, Notes on the Tübatulabal Language, ibid. 38.341–44.

[5] See Sapir-Swadesh, Nootka Texts, Linguistic Society of America, 1938, pp. 236–9.

based on the behavior of a number of stems mentioned in the grammar; then both collaborators went through Voegelin's lexical files and text material (assembled before the present theory was conceived) to find which morphemes could and which could not be explained on the basis of the first assumptions. This led to a correction and extension of the phonological theory. The theory was counted as finally developed when it accounted for all the phenomena illustrated in the assembled material. The value of the theory is not merely that it is accurate, but that it provides an overlying general pattern (regular principles) to phenomena which, otherwise, could only be presented as a series of distinct, partial, limited patterns (rules and irregularities).

THE SUFFIXATION VOWEL

A relatively simple problem is that of the vowels used before different suffixes. Let us compare the infinitive of several stems and themes with the simple imperfective, the causative, and the benefactive.

tək 'to eat'	*təkat* 'he is eating'	*təkinat* 'he is causing him to eat'	*təkanat* 'he is eating for him'
ala·w 'to talk'	*ala·wat*	*ala·winat*	*ala·wanat*
ta·wək 'to see'	*ta·wəgat*	*ta·wəgi·nat*	*ta·wəga·nat*
pohol 'to get blisters'	*poholat*	*poholi·nat*	*pohola·nat*
in 'to do'	*inət*	*ini·nat*	*ina·nat*
halʔ 'to sit'	*halət*	*hali·nat*	*hala·nat*
o·l 'to get up'	*o·lot*	*o·linat*	*o·lanat*
mu·yh 'to celebrate'	*mu·hyut*	*mu·hyinat*	*mu·hyanat*
təkilo·k 'to pretend to eat'	*tekilo·got*	*təkilo·ginat*	*təkilo·ganat*
təkiwə·t 'to eat collectively or ravenously'	*təkiwə·dət*	*təkiwə·dinat*	*təkiwə·danat*
pələ·la 'to arrive'	*pələ·lat*	*pələ·linat*	*pələ·lanat*
yə·wu 'to hold'	*yə·wut*	*yə·winat*	*yə·wanat*

Disregarding for the present the length of the suffixation vowel we note that an *i* is regular in connection with the causative; this is likewise true of several other suffixes, including: -ᶦ*wkañ* past habituative, -ᶦ*šamā* future, -ᶦ*wa* passive, -ᶦ*ninəma* distributive, -ᶦ*wə̄də* collective

intensive, -ʿbaꜣa 'to want to···', -ʿlōgo 'to pretend to'.[6] The vowel
with the benefactive is consistently a; no other suffix is so characterized.
The quality of the suffixation vowel for the imperfective element may be
any back vowel, a, o, u, ə (a is by far the most common; e is found in
one or two cases), and is determined by the preceding morpheme.
Several other suffixes agree with imperfective -t in their behavior with
regard to the suffixation vowel; thus: -H imperative, -maʀ exhortative,
-puwa 'to seem to···', -laʀ 'going', -gima 'coming'. Furthermore,
the vowel which a morpheme has before these suffixes is the same as
that which it has in final position in the case of those morphemes that
end in a vowel in final position. We may therefore take the vowel
preceding suffixes of this group to be a part of the preceding morpheme,
even though most morphemes lack the vowel in word-final. Suffixes
like the causative have the peculiarity of inducing a change of the final
vowel to i and the benefactive has the peculiarity of changing it to a.

Since most morphemes lose their final vowel when they stand in final
position, it is simplest to mark those that retain it. We may do this
by means of the symbol ʀ, e.g., hūdāʀ 'for the sun to be up' (inf.
hu·da).

<div align="center">TERMINAL UNVOICING</div>

The stops and affricates of certain morphemes alternate between
voiced and unvoiced according to whether they stand in medial or
terminal position. This is illustrated for final position by ta·wəgat :
ta·wək, təki-lo·go-t : təki-lo·k, təki-wə·də-t : təki-wə·t, quoted above.
The same is true of initial position, as appears in reduplication, for
example, a·dawə·k '(he) saw' (perfective) : ta·wək 'to see', ə·bələ·la
'he arrived' : pələ·la 'to arrive', u·buw 'he irrigated' : puw 'to irrigate'.
Now, it is generally true in Tübatulabal that voiced stops and affricates
occur only in intersonantic, syllabic-initial position, and it is clear that
we are dealing with a case of positional alternation: the substitution
of voiceless for corresponding voiced takes place in those positions
where voiced stops do not (one might say, cannot) occur.

There are, of course, morphemes with fixed voiceless stops, e.g.,
tək 'to eat : ətəki-n 'he caused him to eat', pušk 'to blow' : upušk 'he
blew'.

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[6] The reader is asked to disregard capital letters and other special symbols until
they are explained later.

MODIFICATION OF FINAL CLUSTERS

Cases like *mu·yh* : *mu·hyut* may be accounted for under a rule that clusters of *h* plus sonorant metathesize in word-final position. Other examples are: *a·na·hlət* 'he is making it fast' : *aʔana·lh* 'he made it fast'; *ponihwəy* 'of the skunk' : *poniwh* 'the skunk'.

In cases like *halʔ* : *halət*, the morphophonemic formula must be based on the final form, in order to distinguish such cases from others like *pohol* : *poholat*. We set up formulae like **halʔə̄* and the rule that clusters of liquid or nasal plus *ʔ* lose the latter except in word-final. Other examples are: *gūlʔa-* 'to play', *MONʔmōnʔo-* 'to boil', *Lohōmʔa-* 'to enter'.

VOWEL LENGTH

The greatest complexity is found in the matter of vowel lengths. The vowel-length of suffixes is determined by the stem, or stem-suffix complex, to which they are attached. The vowel-lengths of the stem frequently vary as between unreduplicated and reduplicated forms, and the vowel-lengths of the suffixes may differ according to whether the stem is reduplicated or not. Let us take a number of words which illustrate different treatment of vowel lengths, giving the infinitive to show the unreduplicated form, the perfective to show the reduplicated form, except in a few cases where other forms have to be taken. The reduplication consists of repeating the stem-vowel, rather the first vowel of the stem, before the word. The examples are selected to show the nature and complexity of the phonologic problem. Long themes, either primary or involving suffixes, are expressly chosen in order to show the treatment in syllables remote from the initial. Morphophonemic formulae for the stem are given here for convenience, but have yet to be justified.

(1) *ta·wəgi·-na-na·-la* 'to go along causing him to see' *a·dawə·gina·nala* 'he went along causing him to see' **dawəga*

(2) *pələ·la* 'to arrive' *ə·bələ·la* **belōlaʀ*

(3) *təwəla·-n* 'to fix it for him' *ə·dəwəlan* **dəwələ*

(4) *to·yla·n* 'to teach him' *o·do·yla·n* **dōylāʀ*

(5) *payʔigə-la* 'to go along turning' *a·bayʔigəla* **bāɣʔgə*

(6) *puwa·-n* 'to irrigate it for him'   *u·buwa·n*   *buwā

(7) *poloṇa·-n* 'to beat it for him'   *opolo·ṇan*   *poLoṇa

(8) *poholi·-n* 'to cause him to get blisters'   *opoholin*   *poHoLa

(9) *či·čwana·bə* 'to accompany him'   *iči·čwana·bə*   **čižwanābə̄R*

(10) *tə?əbinuga?adawa·-n* 'to tell a myth for him'   *ətə?əbinuga?-adawa·n*   **tə̄?binugā?-dawa*

(11) *tuga?ana-n* 'to make it deep for him'   *utuga?anan*   **tugā?na*

(12) *togo·y?a-n* 'to decoy it for him'   *otogo·y?an*   **togōy?a*

(13) *puški-na·-n* 'to blow it for him'   *upuškina·n*   *pūška

(14) *kina-n* 'to bring it for him'   *iŋgina·n*   *giNa

(15) *cami·-n* 'to burn it'   *anžami·n*   *žamā

(16) *kami·ža-n* 'to catch it for him'   *akami·žan*   *kamīžə

(17) *cənənə·?* 'to shake it'   *əcənənə·?*   **cəNənə̄?a*

(18) *ta·twal* 'man'   *ata·twa* ' group of men'   *tādwaR

(19) *ha·ya·-n* 'to stir it for him'   *a·ha·ya·n*   *hāyā

(20) *šiwga-n* 'he combed his hair'   *i·šiwganat* 'he is combing his hair for him'   *šiwga

(21) *halay?i-n* 'to make him wet'   *a·halay?in*   **halāY?a*

(22) *hu·da* 'for the sun to be up'   *uhu·da*   *hūdāR

(23) *wi·mi·wi·mi·-n* 'to cause him to zigzag'   *i·wi·mi·wi·mi·n*   *wīmīwīmīna

(24) *mə·hli·n* 'to hurt him'   *ə·mə·hli·n*   **mə̄hlīna*

(25) *ma·ncu?i-n* 'to make him tame'   *a·ma·ncu?in*   **māncū?u*

(26) *ma·ygi-n* 'to make him go ahead'   *a·ma·ygin*   *māygə

(27) *wi·na-gə·m* 'to come to give him a present'   *i·wi·nagə·m*   *wīna

(28) *wə·?in* 'to pour water'   *ə·wə·?in*   **wə̄?ina*

(29) *lu·mi·n* 'to take it off'   *u·lu·mi·n*   *lūmīna

(30) *yahna* 'to believe him'   *a·yahnan*   *yāHnana

(31) *yə·wa·-n* 'to hold it for him'   *ə·yəwa·n*   **yə^ʔəwūʀ*

(32) *ya·yaʋ* 'to be timid'   *a·yayaʋ*   *yayaÑa

(33) *yilaho·-la* 'to go along happy'   *iyilahola*   *ʏɪʟaʜo

(34) *nəbaʔ* 'to snow'   *ənəbaʔ*   **ɴəbā̃ʔ*

(35) *wi·bi-n* 'to make him fat'   *iwi·bin*   *wībə

(36) *wimšini·-n* 'to make him move out of the way'   *iwimšini·n*   *wīmšin

(37) *u·di-na·-n* 'to untie it for him'   *u·ʔu·dina·n*   *ʔūda

(38) *a·gi-na·-n* 'to cause him to open his mouth for him'   *aʔa·gina·n*   *ʔāga

(39) *aya·w* 'to grow'   *aʔaya·w*   **)ayāwə*

(40) *əhcaw* 'to help him'   *əʔəhcaw*   **)ə̄ʜcawa*

(41) *a·na·hli-n* 'to cause him to fast'   *aʔana·hli·n*   **)anaʔahlə*

(42) *ə·wəni·-n* 'to stop him'   *ə·ʔə·wəni·n*   **ʔə̄wənə*

(43) *ina-n* 'to do it for him'   *ina·n*   *ʔiɴə

(44) *o·li-n* 'to help him up'   *o·li·n*   *ʔolo

(45) *i·ʔa-n* 'to give him a drink'   *i·ʔa·n*   *ʔiʔa

(46) *o·wi·-n* 'to mark it'   *o·ʔowi·n*   *ʔoʔowā

(47) *kə·ʔi-n* 'to cause him to bite'   *ə·gi·n*   **gə̄ʔə*

(48) *šu·ʔa-n* 'to dry it for him'   *u·ša·n*   *šuʔa

We observe that stems beginning in a vowel have *ʔ* in the reduplication. As will be seen later, it is convenient to assume an initial *ʔ* to be morpho-phonemically basic in these cases. All stems then begin in a consonant. There is never more than one initial consonant.

Turning to the matter of vowel-length, we note first that the reduplication vowel is always long before a voiced stop or affricate, always short before a voiceless stop or affricate. This correlation must have some connection with a certain fact of phonemic occurrence: in those positions where either a voiced or voiceless stop may occur, only a short vowel ever precedes a voiceless stop; either a short or a long vowel may precede a voiced stop.

Other consonants, which do not have the voiced-voiceless contrast, reduplicate with long vowel for some stems, with short vowel for others. This difference in treatment of vowels establishes a morphophonemic dichotomy extending beyond that in the stops; one class includes all the basic voiced stops and some instances of each of the other phonemes, the other class includes all fixed voiceless stops and some instances of each of the other phonemes. Let us refer to the latter group as shorten-

ing consonants, the former as neutral consonants. The classification may be partly extended to non-initial position by analogy with the stops. All consonants which are preceded, in any of the forms of the morpheme, by a long vowel are neutral. Of those non-stop consonants which are never preceded by a long vowel, some may be vowel-shortening consonants. We may symbolize shortening non-stops by a capital letter; and for the glottal stop, we use ⟩ for capital ʔ.

From examples 14–17 we observe that a nasal after the stem-vowel is included in the reduplication if the initial consonant is a basic voiced stop but not if it is fixed voiceless: *iŋgin* 'he brought it', *anʒam* 'it burnt' but *akami·č* 'he caught it', *əcənə·ʔ* 'he shook'. The nasal is assimilated to the consonant. The vowel before the nasal + consonant is short.

Our criteria of consonantal type, though applicable only in some cases, enable us to identify some themes as containing only neutral consonants, and in such themes (1, 2, 4, 6, 15, 19, 23, 24, 26, 28, 29, 31, 37, 42, 44, 45, 46, 47, 48) we can observe the principles of vowel-length as they apply when not interfered with by secondary shortening. We find that some vowels are always long, some vowels alternate between long and short; it is perhaps simpler to speak of 'heavy' and 'light' vowels instead of fixed-long and alternating-length vowels. Except for 31 and 45–48, the actual length of light vowels can be covered by simple rules: (a) in the syllable adjacent to one containing a heavy vowel, a light vowel is always short; (b) otherwise, a sequence of light-vowel syllables alternate in length, the first being long, the next short, and so on. Heavy vowels are illustrated in *to·yla·n* : *o·do·yla·n* (4), *ha·ya·n* : *a·ha·ya·n* (19), *wi·mi·wi·mi·n* : *i·wi·mi·wi·mi·n* (23), *mə·hli·n* : *ə·mə·hli·n* (24), and others. Alternating length of light vowels is shown very well in the first example: *ta·wəgi·nana·la* : *a·dawə·gina·nala*. In 37 and 42 we see how a preceding heavy vowel affects the alternation of light vowels by preventing the first following vowel from being long: *u·dina·n* : *u·ʔu·dina·n* (stem **ʔūda*); *ə·wəni·n* : *ə·ʔə·wəni·n* (stem **ʔə̄wənə*). In 2 and 6 we have a following heavy vowel preventing a preceding light vowel from being long, but the reduplication, being two syllables removed, is long: *pələ·la* : *ə·bələ·la* (stem **bələ̄la*); *puwa·n* : *u·buwa·n* (stem **buwā*).

Examples 31, 44, 45, and 46, although they contain only neutral consonants, seem to show contradictions to the phonological theory already presented. Take example 31, *yə·wa·n* : *ə·yəwa·n*. If the base were **yə̄wāna*, the reduplicated form should be **ə·yə·wa·n* and

it is not. If it were *yəwāna, the unreduplicated form should be
*yəwa·n. Example 46 is similar. Examples 44 and 45 show no redupli-
cation but only a change in the vowel lengths: o·lin : o·li·n; i·ʔan,
i·ʔa·n. The clue to these anomalies is to be found in 47 (kə·ʔi-n :
ə·gi·n) and 48 (šu·ʔa-n : u·ša·n), which show that contraction takes
place under some circumstances. If o·lin is from *ʔo·lina· (stem
*ʔolo), its reduplication would be *o·ʔoli·na; a contraction in the first
two syllables would give us the actual form o·li·n. Similarly, i·ʔan :
i·ʔa·n are from *ʔi·ʔa-na·, *i·ʔiʔa·na. yə·wa·n : ə·yəwa·n can then be
derived from *yə·ʔəwa·n : *ə·yəʔəwa·n < stem *yəʔəwū. Similarly,
the forms of 46 are based on a stem *ʔoʔowā. The rule of contraction
is that it takes place between light vowels separated only by ʔ except
as between the two syllables of an unreduplicated dissyllabic stem
(47, 48) and between the vowels of a certain type of extension of the
stem final, illustrated in wə·ʔinat 'he is pouring water' : wə·ʔina·ʔat
'he is pouring lots of water' (stem *wə̄ʔina). The quality of the contract
vowel is that of the second of the two component vowels, as is seen in
u·ša·n (< *u·šuʔa·na), and the quantity is long if one of the components
is long, short if both are short. Only two of three light vowels separated
by ʔ contract, as in i·ʔa·n < * i·ʔiʔa·na.

If we now turn to words containing shortening consonants, we soon
see that a shortening consonant affects only the vowel before it. The
phonological effect of the vowel, whether light or heavy remains the
same. In constructing our formulae a vowel, even though followed
by a shortening consonant, may be identified as light or heavy according
to the behavior of the adjacent vowels, and consonants may be identified
as shortening if vowels are short before them under conditions where one
would expect a long vowel before a neutral consonant. təki-n : ətəkin
points to a stem *tə̄ka-; the heavy vowel is evidenced by the fact that
the following vowel is short whether in the second or third syllables of
the word. poloɒa·-n : opolo·ɒan points to a stem *poloɒa- with all light
vowels; the actual forms show secondary shortening from *po·loɒa·n :
*o·poLo·ɒan. And the remaining examples can similarly be reduced to
adequate formulae.

Word-final vowels insofar as they are retained are shortened. R
might thus be called a vowel-shortening consonantal morpho-phoneme.
(Indeed, it might be identified with ⟩, if we could then say that a mor-
pheme-final ⟩ is lost entirely except in word-final position, and that
in word-final position it appears only in its effect of retaining and
shortening the preceding vowel.)

In addition to the foregoing theory it is necessary to recognize a special v$^?$v group which acts in the length theory like a single heavy vowel (see 5, 10, 11). We may set these up as v̄$\rangle$ and state the rule that a heavy vowel plus a syllable-final is pronounced as v$^?$v, e.g., *tə$^?$əbinuga$^?$adawa·n* < stem **tə̆$\rangle$binugā$\rangle$dawa-*. If a semivowel intervenes between the heavy vowel and the syllable final $\rangle$, as in 5, a high vowel (*i* or *u* according to the semivowel) is inserted.

<center>CONCLUSION</center>

If it has been possible, by the recognition of a non-patent phonology involving two morpho-phonemic types of consonants and two of vowels and a set of mechanical rules, to reduce the apparent irregularity of Tübatulabal phonology to system, this very fact guarantees the truth of our theory. Truly irregular alternations could not be reduced to order.

The value of a phonological theory is in direct proportion to the extent of its application, in inverse proportion to its complexity. Our theory might be called fairly complex, but it applies to a great many words. There are several hundred verb stems attested in Tübatulabal and about a score of suffixes. Not only are the suffixes quite freely added to the stems, but quite a number of different combinations of suffixes are possible. It is probably not an exaggeration to estimate that any particular stem may enter into 300 suffix combinations and that some suffixes may occur in 25,000 stem-suffix combinations. These, then, are measures of the value of determining the phonological formula for any given stem or suffix. In presenting the lexicon of the language, the formulae will serve as a short-hand method of indicating the facts for each lexeme.

For other languages we hope our treatment of Tübatulabal may offer some useful methodological suggestions. To linguistic theory Tübatulabal phonology is an instructive instance which can contribute to eventual generalization.

THE PRONOUN *so, *sā, *tod AND THE INDO-HITTITE HYPOTHESIS

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As early as 1921 Emil Forrer[1] advanced the hypothesis that Hittite separated from the Pre-Indo-European parent stock before the time of the Primitive Indo-European language that has been partially reconstructed by the comparative method. Forrer did not undertake to prove his point, but I have tried to do so in a series of articles.[2]

The evidence that I have presented is of two kinds. (1) In general the Indo-European languages diverge more and more from one another with the lapse of time, while the earliest known documents present languages that are relatively close to one another. Hittite, however, whose records antedate those of any related language, is strangely unlike the others. As early as 1800 B.C. its verb system differed from that of Sanskrit or Greek about as much as the Modern French verb does. This state of affairs suggests a longer period of separate development than Sanskrit and Greek had passed through, in other words, earlier separation from the parent stock.

(2) Nevertheless Hittite preserves a number of archaic features that have been lost by all the previously known Indo-European languages. If we ascribe these to Primitive Indo-European, we must suppose that the several historical languages lost them independently. While it is quite possible for eight separate languages all to lose a particular feature, it is a remarkable coincidence if the same eight languages are found to have lost a second feature. As these apparent coincidences accumulate, they presently become incredible; a certain number of parallel developments, even if they are all negative, imply a period of common development.

These two lines of reasoning seem to me to require the assumption that Hittite and Primitive Indo-European are both offshoots of an earlier parent speech which I have called Primitive Indo-Hittite.

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[1] Mitteilungen der deutschen Orient-Gesellschaft 61.26 f.

[2] LANGUAGE 2.29–34 (1926); TAPA 60.25–37 (1930); LANGUAGE 9.1–11 (1933). See also HG 30–2 (1933); AJP 59.96 f. (1938); LANGUAGE 14.69 and fn. 2 (1938).

The doctrine has, however, not found much favor. The first kind of evidence is frequently disregarded entirely, apparently because there is no assignable limit to the rapidity with which a language may change; the Hittite verb system may actually have outdistanced the French by thirty-seven centuries even without an earlier start.

The second kind of evidence has recently been ruled out of court by two scholars, unless it can be shown that the Indo-European languages show some positive innovation in which Hittite does not share.

Joseph Mansion, Mélanges Linguistiques offers à M. Holger Pedersen 486: Il semble donc que le hittite, à côté de procès plus récents, c'est-à-dire plus évolués, présente intacts des restes d'indo-européen très archaïques, tels qu'aucune des langues connues jusqu'à présent ne permettait de reconnaître. L'hypothèse d'un pré-indo-européen serait donc justifiée, à condition que l'on puisse établir qu'il y a eu une innovation commune de toutes les langues en dehors du hittite et assez caractéristique pour exclure et le hasard et un développement parallèle de prototypes hérités de la langue-mère dans les diverses langues-filles.

Holger Pedersen, Hittitisch und die anderen indoeuropäischen Sprachen 12: Zweitens ist der schon von Mansion . . . gebührend betonte Grundsatz zu beachten, dass nur gemeinsame Neuerungen der zehn lebendigen Sprachzweige sie dem Hittitischen gegenüber als eine Einheit charakterisieren können.

I cannot agree with this opinion, but it is unnecessary to argue the point, since there is at least one clear case of an innovation that is common to the Indo-European languages as against Hittite. Unless Mansion and Pedersen can invalidate the following argument, they, at least, must apparently accept the Indo-Hittite hypothesis.

A peculiarity of Hittite syntax is that, with certain definite exceptions, every sentence in continuous discourse is joined to the preceding sentence by a connective word. In the later language there is, aside from the enclitics -(y)a 'and' and -ma 'but', just one of these, namely nu.[3] This word always stands initial in its clause, and it is used freely to connect successive sentences, no matter what their logical or chronological relationship may be. If a sentence contains a nominative or accusative pronoun whose antecedent is contained in the preceding sentence, it is regularly introduced, not by nu, but by nas (nom.), nan (acc.), nat (neut.), ne (nom. pl.) nus or nas (acc. pl.), ne (neut. pl.), which forms function as nu plus the enclitic pronoun -as. That this is so was proved by Ungnad,[4] and probably all Hittite specialists are fully

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[3] The ritual texts often employ ta along side of nu, but their language is archaistic in some other respects also.

[4] ZDMG 74.417–22 (1920).

convinced. Nevertheless doubts are sometimes expressed by Indo-Europeanists, and consequently it is necessary to restate the argument as clearly as possible.

The alternatives are these: (a) *nas* consists of *nu*, the sentence connective, and -*as*, the enclitic anaphoric pronoun, or (b) *nas* is itself an anaphoric pronoun, which may connect sentences, just as the anaphoric pronoun *apas* may do (e.g. Hatt. 4.68, Anniwiyanis 2.16). The following considerations require us to accept the former alternative.

(1) The connective *nu* always stands at the head of its clause, either alone or with enclitics (*nu-sse* 'and to him', *nu-mu* 'and to me', etc.), and the enclitic pronoun -*as* is always attached to the first word of a clause (*man-as* 'if he', ᵁᴿᵁ*Durmitta-ma-as* 'however he to the town *Durmittas*', etc.). Just so the conglomerate *nas* always stands at the head of its clause, while *apas* and the other words that occasionally take the place of a sentence connective at the head of a clause are not so restricted. The only one of these in the later language aside from *nu* and *nas* that always takes the initial position is *nasta* 'then, thereupon, finally'; and this is merely a conglomerate of *nu* and -*asta*.

(2) Neither *nu* nor *nas* is ever combined with either of the enclitic sentence connectives -(*y*)*a* 'and' and -*ma* 'but'. This restriction, however, does not apply to *apas* and the other pronouns and adverbs that may supplant *nu* in the initial position. Furthermore these other words are freely combined with *nu*, as *nas* never is. Thus we have *nu apas* (passim), *apass-a* (Hatt. 4.79), *apas-ma* (passim), -*ya* · · · *apas* (Code §10); *nu* · · · *kas* (passim), *ki-ma* (Code §§40, 41); *nu kwis, kwis-ma, -ma kwis* (passim); *nu man* 'and if', *nas man, man-ma* (passim).

(3) Other enclitics may be inserted between *nu* and -*as*. This is the constant position of the particle of direct quotation, -*wa* or -*war*-; we always have *nu-war-as, nu-war-at*, etc., never **nas-wa* like *apas-wa*. Similar is *nu-smas-an* 'et vos eum' (Instructions for Temple Officials 4.20).

In the early Hittite texts the rules for sentence connection are not precisely the same as in later Hittite, and, on account of the extensive modernization of these texts by copyists, we can scarcely hope to understand fully the system that originally prevailed in them. It is clear, however, that in the earlier period there were two other connectives that shared the field with *nu*, namely *ta* and *su*,[5] and that each of them had beside it a conglomerate with the enclitic pronoun -*as*, namely *tas* and *sas*. The proof that these words are conglomerates

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[5] Sommer, Die hethitisch-akkadische Bilingue des Ḫattušili I 78.

and not merely anaphoric pronouns is the same as that already adduced
for *nas*, except that we have no variants beside them similar to *nu-war-as*
beside *nas*. The inflectional forms of these three conglomerates are
listed in Table 1.

TABLE 1

Sentence-connecting Conglomerates of Hittite

Sing.

nom. masc.	*nas (na-aš)*	*tas (ta-aš)*	*sas (ša-aš)*
acc. masc.	*nan (na-an)*	*tan (ta-an)*	*san (ša-an)*
neut.	*nat (na-at)*	*tat (ta-at)*	

Pl.

nom. masc.	*ne (ne, ne-e)*[6]		*se (še)*[6]
acc. masc.	{ *nus (nu-uš)* { *nas (na-aš)*	*tus (tu-uš)* *tas (ta-aš)*	*sus (šu-uš, šu-* *ša)*
neut.	*ne (ne)*	*ta (ta, ta-a)*	

From the fact that Hittite *tas* is a conglomerate of sentence connective
ta with pronoun -*as* Ungnad, Friedrich, Couvreur, and Pedersen[7]
conclude that the word cannot be identified with the IE pronoun *to-*.
Walter Petersen[8] formerly took this attitude, but he now recognizes its
incorrectness.   To me Hrozný's[9] connection of the two words has always
seemed as certain as any etymology can be.   As I have pointed out,[10]
the use of Skt. *sa*, *tat* in prose, especially early prose, is similar to that
of Hitt. *nas* and *tas*.   The Sanskrit pronoun does not alternate with a
conjunction **ta*, and there is nothing in that language to suggest that
acc. sg. *tam* (for example) is a conglomerate of two words; but the word
does serve as a sentence connective with the monotonous frequency of
Hittite *nas* and *tas*.   Furthermore, it gravitates to the head of its
clause, although it is not excluded from other positions as are Hitt. *nas*
and *tas*.   That this use of Skt. *ta-* was inherited is shown by the similar
use of Gk. ὁ ἡ τό in many narrative passages in Homer[11] and of the same

[6] Correct HG 206, where these forms are called neuter pl.

[7] Ungnad, ZA NF 2.104 fn. 1; Friederich, ZA NF 2.293 f., RHA 3.160; Couvreur,
De Hettitische Ḫ 328; Pedersen, Hittitisch und die anderen indoeuropäischen
Sprachen 64 f.

[8] AJP 53.194 f. fn. 4; 58.310 and fn. 7.

[9] SH 135 f.

[10] JAOS 47.174–7 (1927).

[11] E.g. Il. 1.53–8, 247–51.

stem in early Germanic prose.   There can be no doubt that in Primitive Indo-European narrative style the pronoun *so sā tod* and its derivatives played a rôle in sentence connection not very different from that played by Hitt. *nas* in the later texts and by *nas, tas,* and *sas* together in the archaic and archaistic texts.

Furthermore the heteroclitic *so* and *sā* of Primitive Indo-European correspond to Hitt. *sas* quite as clearly as does IE *to-* to Hitt. *tas.* It is noteworthy, on the one hand, that Hittite is like Indo-European in lacking neuter forms in this series, and, on the other, that Latin has cognates of Hitt. *san* and *sus* in the archaic accusatives *sum, sam,* and *sōs = eum, eam, eōs.*

But, if we identify Hitt. *sas* with IE *so,* Hitt. *tat* with IE *tod,* etc., we must either derive the Hittite system of sentence connectives and conglomerates of these with the pronoun *-as* from the very different system of Primitive Indo-European, or we must reconstruct an earlier system from which both can be derived.   Walter Petersen[12] embraces the former alternative.   He regards Hitt. *sas* and *tas* as inherited from the Primitive Indo-European pronoun *so, sā, tod;* the limitation to use as a sentence connective he regards as secondary.   For Hitt. *nas* he can find no satisfactory explanation.   He does not offer any explanation of the following striking features of the Hittite system.   (Cf. above 13–14). If *tas* and *nas* are merely pronouns, why are they confined to the same cases as the enclitic pronoun *-as?*   Why are they confined to the initial position in the clause?   Why are they never found in the same sentence with *ta, nu, -(y)a,* or *-ma?*   Why is the enclitic *-as* never combined (according to Petersen) with *ta, nu,* or *su,* as it frequently is with the other connectives *-(y)a* and *-ma?*[13]

Unless an answer to these questions can be furnished on the basis of derivation from Primitive Indo-European, we must turn to the reconstruction of an earlier (Indo-Hittite[14]) system from which both the Hittite system and the Indo-European can be derived.

Since Indo-European as well as Hittite knows *nu* as a sentence connective, this must be ascribed to Indo-Hittite.   The Indo-European meaning 'nun, denn, also',[15] which stands in recognizable relationship to the temporal meaning of the adverb, is probably nearer Indo-Hittite

[12] AJP 58.309–16 (1937).

[13] Since Petersen did not know of the connective *su,* he made no attempt to refute the analysis of *san* as *su + an.*

[14] The name is unimportant, and I am ready to adopt a better one; but the objections hitherto urged against this one do not seem to me valid.

[15] Brugmann, Grundriss 2².3.992.

usage than is the colorless connective force of the Hittite word.   At any
rate *nu as sentence connective must originally have been a weakened
'now'.   If so, it is likely to have been used for inferences rather than to
introduce the next stage of a narrative.

Since the conglomerate nas gains in frequency during the period in
which we can observe Hittite, and since there is no similar conglomerate
in Indo-European,[16] we may infer that the Hittite conglomerate is a new
development.

If Hitt. tas is composed of ta + -as, the sentence connective ta must
be at least as old as tas.   We must therefore assign a sentence connective
to to Indo-Hittite.   Indo-European has no such word, and the inference
is easy that it was supplanted by the conglomerate and, after this had
become a true pronoun, by its derivatives.   If the connective *nu
originally meant 'now' and served chiefly for inferences, *to probably
meant 'then' and connected the items of a narrative.

It is likely that Pre-IH to + om would yield *tōm.   This may have
been shortened under the influence of the noun declension.   It is also
possible that we have zero grade of one element or the other.   Further-
more, elision in such a phrase as this cannot be ruled out.   What we
know is (1) that the process of reconstruction gives us *tom, and (2) that
the Hittite evidence requires the analysis of this into *to + *om.

Indo-European has no connective *su, and besides an Indo-Hittite
phrase *su-om would scarcely yield IE som.   We should rather see the
Indo-Hittite connective in the IE nom. sg. masc. so.[17]   In Hittite the
commonest connective is nu, and it seems that this infected the vowel of
*sa shortly before the latter was completely given up.   We may set up
an analogical proportion: nan : nu = san : su.

If the bare particle survived as nom. sg. masc. in Indo-European, the
explanation must be that this particle was used particularly where there
was no change of subject.   Ordinarily such a sentence would require no
expression of the subject; to use Latin forms except for the connective,
the Indo-Hittite type would be Caesar venit, so vidit.   But if the con-
nective *to was restricted to sentences with change of subject it would
normally require expression of the new subject for clarity, e.g. Caesar
venit, to exercitum Ariovistus vidit.   Hittite tas probably represents an
Indo-Hittite sentence type: Caesar ad Ariovistum venit, tos Caesarem

[16] Gk. νυν, νῦν, Lat. num. nunc, etc. contain original u and therefore cannot be
identified with Hittite nan.   Lat. nam is entirely isolated.

[17] In Code § 25 there is a variant (KBo.6.5.1.5) sa for ta-an, where there is no
change of subject and where the direct object is easily inferred from the preceding
sentence.   But probably Hrozný is right in correcting to ša<-an>.

vidit.   But this type also would be relatively rare.   Hence the way was clear for the reinterpretation of *so as a nominative.

Conglomerates of the accusative must, on the other hand, have been more common in case of change of subject, e.g. *Caesar venit*, tom *Ariovistus vidit.*   The type: *Caesar ad Ariovistum venit*, som *vidit* no doubt occurred, since Latin preserves *sum* and Hittite *san*; but *tom and *tod must have prevailed as accusatives.

In the nom. pl. masc. either *so or the conglomerate *soi (cf. Hitt. *se*, Att.-Ion. *oi*) must have been frequent.   It is not impossible, then, that Primitive Indo-European had nom. pl. *soi* instead of or rather along side of *toi*.

It is not strange that Indo-European lost the enclitic pronoun *-os. As *so *tod took over the pronominal function the need for the equivalent enclitic vanished.

At some time during the Pre-Indo-European period the feminine gender had its origin.   Whether this process found the pronoun *so *tod already in existence we cannot tell.   If so the development of the feminine must have yielded *sā, *tām, etc. directly.   But quite possibly the development occurred while the enclitic pronoun was still in use, so that *tām goes back to an earlier conglomerate *to + ām.   In any case nom. *sā must be an analogical development from *so after this had been reinterpreted as a pronoun.

It is not clear when or how the oblique cases of IE *to- were supplied. The oblique pronominal forms of Hittite and of the several Indo-European languages differ so widely that it is scarcely possible to reconstruct either the Indo-European or the Indo-Hittite paradigm.[18] Neither is it certain whether the oblique cases of the stem *to- were fashioned after pre-existing models or whether the Indo-European pronominal declension was partly based upon conglomerates of IH *to* with various enclitic pronouns of the type of Hitt. *ta-sse* 'et ei'.[19]

If we are correct in assuming that IH *so* was used only when there was no change of subject, it is likely that the Hitt. nom. sg. *sas*[20] is analogical.

We have assumed that *nas* also is a Hittite innovation.   It may have resulted from the actual combination of *nu* with the enclitic *-as* in Pre-Hittite; there is nothing against the assumption that *nwas would yield Hitt. *nas*.   I formerly suggested[21] that the acc. pl. *nus* was from

[18] Cf. Brugmann, KVG, table opposite 406; Sturtevant, HG 207–11.

[19] Cf. HG 194 f. §236.

[20] The only occurrences I know of are KBo.3.34.2.7, 19, 3.9; 3.35.1.15; 3.38.2.22, 31; 3.53.1.6, 7.

[21] HG 199.

TABLE 2

Indo-Hittite Enclitic Pronoun and its Conglomerates

Sing.

nom.	*-os*	*tos*	
acc	*-om*	*tom*	*som*
neut.	*-od*	*tod*	

Dual

nom.-acc.	*-ōu* (?)	*tōu* (?)	
neut.	*-oi*	*toi* (?)	

Pl.

nom.	*-oi*	*toi* (?)	*soi*
acc.	*-ons*	*tons*	*sons*
neut.	*-ā̄*[22]	*tā*[22]	

TABLE 3

Indo-European Pronouns

Sing.

nom. masc.	*so*	
nom. fem.	*sā*	
acc. masc.	*tom*	*som*
acc. fem.	*tām*	*sām*
neut.	*tod*	

Dual

nom.-acc. masc.	*tōu*
nom.-acc. fem.	*tai*
neut.	*toi*

Pl.

nom. masc.	*toi*	*soi* (?)
nom. fem.	*tās*	
acc. masc.	*tons*	*sons*
acc. fem.	*tās*	
neut.	*tā*	

[22] More accurately *-a'* and *ta'* ; but I prefer to disregard the laryngeal hypothe-is in this paper, since it would not affect the argument.

nu + *us*, and that the model *tus* : *tas* yielded *nas*.   Still another possibility is that we have a contamination of **nuas* and *tas*.

The results of our efforts at reconstruction are these.   We assume for Indo-Hittite three sentence connectives: **nu* 'now', **to* 'then, next', **so* 'and'.   The pronoun and the conglomerates that we have been discussing seem to have been declined as in Table 2.   I assume that Hitt. nom.-acc. neut. -*e* was originally a dual form.   I mark with (?) forms for which there is no Hittite evidence.   The Primitive Indo-European heteroclitic pronoun is exhibited in Table 3.   Latin indicates that certain accusatives of the stem **so-* survived, and, as already noted (17), Attic-Ionic *oi* may very well come from IE *soi*.   How this system developed out of the one given in Table 2 I have tried to show.

Unless there is some flaw, not apparent to me, in the above reasoning, we have here as near an approach to proof of the Indo-Hittite hypothesis as one can hope for in the nature of the case.   I must add, however, that evidence on any feature of linguistic reconstruction can never quite amount to proof.   One must rely rather upon the cumulative force of many bits of evidence; I have previously presented a number of these, and they are confirmed by the present argument.   I hope elsewhere to show that the study of Pre-Indo-European laryngeals also points to the Indo-Hittite hypothesis in spite of the contrary opinion of most scholars who have engaged in it.

THE IMPERFECT IN ARMENIAN AND IRISH

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1. It is probably no more than a coincidence that in both OArmenian and OIrish a distinction of voice rather generally observed in other parts of the verbal paradigm is wanting in the imperfect indicative, so that in Armenian the active and the passive of normal thematic verbs have here a common inflection, as do the active and the deponent verbs in Irish.[1] The contrast thus presented to the corresponding present inflection in each language is shown in Table 1:

TABLE 1

		OArmenian			OIrish		
		Pres. Act.	Pres. Pass.	Ipf., both voices	Pres. Act. (con- junct)	Pres. Dep. (con- junct)	Ipf. Act.	Ipf. Dep.
sg. 1		ber-em	ber-im	ber-ei	·biur	suidig-ur	·ber-inn	·suidig-inn
	2	-es	-is	-eir	·bir	-ther	·beir-thea	-thea
	3	-ē	-i	-ēr	·beir	-edar	·ber-ed	-ed
pl. 1		-emkʻ	-imkʻ	-eakʻ	·beram	-mer	·beir-mis	-mis
	2	-ēkʻ	-ikʻ	-eikʻ	·berid	-id	·beir-the	-the
	3	-en	-in	-ein	·berat	-etar	·beir-tis	-tis

Of course, nothing new can be gleaned from a purely physical comparison of the imperfect endings in the two languages, but the peculiar agreement in paradigmatic pattern none the less invites renewed inquiry, and in what follows I shall try to show that in both languages regular phonetic or special morphological changes had left certain earlier imperfect active forms ambiguous, the ambiguity being in Armenian (primarily at least) one of person, but in Irish one of tense, and that

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[1] The endings of the act. ipf. in the other OArm. conjugations, e.g., sg. 1st *layi* (: pres. *lam*), *lnowi* (: pres. *lnowm*), and in the post-classical sbj. ipf., e.g., *bericei* (or *ēi*), are of course analogical; so also is the use of the endings -*inn*, -*th(e)a*, etc. in the OIr. pret. future ('conditional') and sbj. pt.

thereupon certain other forms originally medio-passive (and in both languages rendered more or less superfluous as such by the genesis or co-existence of another and more vigorous type of medio-passive) came into use to supplement the active imperfect paradigm at its weakest points, a procedure which led eventually to a complete falling together of the active and medio-passive (or deponent) paradigms in this tense.

THE ARMENIAN IMPERFECT

2. The forms of the copula in the present and imperfect are identical with the endings of the normal thematic (active) verbs in the same two tenses, and this identity is commonly ascribed to reciprocal analogical influences[2] operating on theoretical pre-Armenian forms. In the case of the present it is clear that these theoretical forms were in their turn fairly regularly developed from conventional IE athematic and thematic presents respectively,[3] and their reconstruction, apart from the puzzling

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[2] A. Meillet, Esquisse d'une grammaire comparée de l'armenien classique[2] 127(1936).—This work is hereafter cited as Esq.[2]—Cf. also Kieckers, IF 35. 108-14 (1915).

[3] The earlier literature is reviewed by H. Zeller in Brugmann-Thumb(-De-brunner-Sommer), Gdr. d. idg. Sprach- und Altertumskunde 2.4.2. 93-4 (1927). This *k'* Meillet came to regard (Esq.[2] 56) as a special development of IE final *s*. However, as *k'* is known to derive elsewhere from IE *$t\mu$ and *$s\mu$ (e.g., in *k'oyr* 'sister') it seems reasonable to derive its occurrence in personal endings from the addition of enclitic personal pronouns, i.e., 1st pl. *-mes + μ . . . (cf. Skt. *vayám*, Goth. *weis* 'we'), 2d pl. *-te + sμ . . . (cf. Welsh *chwi* 'ye', Goth. [dat. and acc.!] *i-zwis*); on the 2d pl. cf. the similar incorporation of the pronoun into the ending in Welsh 2d pl. *cerwch*; other but less immediate parallels are common enough. In the 1st pl. ending the syncope of *e* between *m* and *k'* must have been fairly late, as shown by the fact that assimilation of the labial nasal has not yet taken place in OArm. (but cf. NArm. *berenk'*); before syncope occurred the monosyllabic ending *-mek'* was abstracted from the verb and used as an (independently accented) 1st pl. personal pronoun, nom.; ultimately the old oblique cases were reformed so as to begin with *m-* also; cf. the abstraction and use as a personal pronoun of the NIr. ending 1st pl. *-maid* or *-muid* in certain northerly dialects (cf. Pedersen, Vgl. Kelt. Gr. 2.310 (1913); the Christian Brothers' Irish Grammar §270 (n.d.), though sharply condemning the usage, gives as examples *chonnaic muid é* 'we saw him', *chonnaic sé muid* 'he saw us'). One is tempted to suppose that Lith. *mēs* 'we', with which Arm. *mek'* is usually compared, has a similar origin; if so, it was abstracted at a time when a primary ending was still possible in the 1st pl. of Lithuanian verbs. The ultimate exclusive use of the secondary ending here (e.g., *dìrbame*) would have been due to avoidance of ambiguity between primary *-mes* and the periphrastic reflexive 1st pl. *-mè-s*, the use of the lengthened grade of the secondary ending (cf. Ved. *-mā*) having evidently proved an insufficient means of distinction. Brugmann, Gdr.[2] 2.2. §384.1 anm. 1, merely

-*k'* of the 1st and 2d pl., presents no great difficulty; but it is equally clear that, even if we allow the widest scope for the subsequent operation of reciprocal analogies, most, at least, of the pre-Armenian imperfects were not regularly developed from IE imperfects. For Meillet the forms *berei, bereir, bereik', berein* are virtually coalesced periphrases containing as their second member an old perfect of the base **es-* (cf. Skt. *ása*), so that in their entirety they are roughly comparable to such imperfects of secondary formation as OCS *nesĕ-achъ,* Lat. *legē-bam;*[4] the 3d sing. *berēr* on the other hand he came ultimately to derive through **bereyr* from a medio-passive 3d sing. **bheretor*[5] (in the terminology employed by Benj. Schwartz and the writer a 'prosoposemic'[6]), and Meillet's explanation of this particular form I gladly accept, although he makes no comment on its earlier tense value, a problem that can scarcely be ignored altogether. Neither does Meillet discuss specifically the ending of the 1st pl. *bereak',* although it is fair to suppose that he regarded this as analogically influenced by the aorist 1st pl. *berak',* the *a* of which he elsewhere pronounces 'unexplained'.[7] The imperfect

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ascribes the initial *m-* of such pronouns to the influence of the corresponding personal endings, an explanation probably adequate for OCS 1st pl. *my,* the oblique cases of which have initial *n-.* Somewhat later in pre-Armenian the pl. nom. of the second personal pronoun (sg. *dow*) was analogically reformed as *dowk'.* Here, however, the oblique cases remained unaffected. Somewhat imperfectly on the analogy of *dowk'* arose the verbal form pass. aor. 2d pl. *berarowk* (: 2d sg. *berar*) discussed in §10 below. The element *k'* having been thus schematized as a sign of plurality, it came to be attached to the sg. nom. of most nouns to form the pl. nom. (*ban : bank',* but *hayr : hark'*), and eventually to the sg. instr. to form the pl. instr. (*baniw : baniwk',* but *oskerb : oskerawk'*); on the tendency to schematization thus revealed; cf. the far more thorough-going use of *-(n)er* as a sign of plurality in NArm. noun declension, e.g., sg. nom. *cer,* gen. *cerow* ··· : pl. nom. *cerer,* gen. *cererow* ···

[4] Esq.[2] 126-7.

[5] Esq.[2] 127; this was undoubtedly Meillet's final view, as shown by his language: 'Mais une forme telle que *berēr* est certainement ancienne, en effet *berēr* repose sur **bheretor* et coïncide avec phr. αβ-βερετορ'. Earlier in the same paragraph, however, he strangely retains from the first edition (1903) what seems to be an incompatible explanation: 'la 3ᵐᵉ personne **-y-r* aurait un aspect particulier parce qu'elle reposerait sur une ancienne form monosyllabique d'imparfait **ēst,* cf. Skt. *áḥ,* Gr. ἧς.' In the same paragraph Meillet derives the post-classical *beriwr* (a by-form to *berēr*) from a form **bheretro* 'avec métathese'. As to this last derivation and its implications I prefer to reserve judgment.

[6] J. A. Kerns and B. Schwartz: Structural Types of the IE Medio-Passive Endings, Lang. 13. 263-78 (1937).

[7] Esq.[2] 125.

of the copula he regards as wholly a re-formation, analogical to the endings of the thematic imperfect—a state of affairs not, I think, to be paralleled in any IE language presenting a general situation at all comparable.[8]

3. As an alternative to the major part of Meillet's explanation just reviewed, and to avoid, if possible, the assumption that the imperfect of the copula is wholly an analogical re-formation, I am disposed to begin with the study of the forms of the copula alone, and to see in such of these as contain *i* the continuants of pre-Armenian **esim*, **esis*, etc.,—in a word, IE optatives with analogical restoration of the normal grade in the base (as in Gk. εἴην) and levelling out of the reduced grade of the mood-suffix throughout the paradigm (as in Lat. *sīs* against early Lat. *siēs*).[9]   The first objection to this explanation will doubtless be the phonological one that it violates the sound-law whereby except in monosyllables the vocalic element of the IE final syllable—whether originally short or long—disappears completely in Armenian.[10] To this I may say: (1) that I question whether the law is valid in this extreme form, at least for IE long vowels in dissyllables originally ending in a consonant, or group.[11] In particular, convincing examples of the loss of Arm. *i* < IE *ī*, *ē* in this position are hard to find; Brugmann, who upholds the law, is compelled to regard the retention of *i* and aor. 3d pl. *edin* as analogical; on the other side, I do not accept the customary derivation of the aor. 3d sg. *ed* from **edhēt*, seeing rather in the 1st sg. *edi* a regular continuant of **edhēm*, etc.,[12] and in the 3d sg. *ed* an analogical form—although this is to anticipate. And (2) that even if the law be accepted in its extreme form, the regular retention of *i* in e.g. 2d pl. *eik'* < **esite + sų* . . . might cause its analogical restoration in other forms.   Next, as to the possibility, from the semantic point of view, of an optative taking over the functions of an imperfect (interchangeability in a single syntactic usage would of course provide a theoretical point of departure for such a development) we have to com-

[8] Cf. however Osc. ipf. 3d pl. **fufans**; It. ipf. 1st pl. *eravamo*, 2d pl. *eravate* as illustrating a somewhat similar tendency.

[9] As far as the *i*-vocalism is concerned, we might as well start out from **esiēm*, but it is doubtful whether interior -*si*- would disappear without a trace, cf. sg. gen. -*oy* < **-osio*.

[10] Brugmann, Gdr.[2] 1. §236 (1897); Meillet, Esq.[3] 19, 55.

[11] Sg. acc. *am* supposedly from **samām* or the like may be the nom., or may be analogical to the sg. acc. of stems ending in a short vowel.

[12] Cf. §9 below.

pare first the modal use of the imperfect in Armenian itself,[13] then the
so-called 'iterative optative' seen in the protasis of past general con-
ditions in Greek,[14] and probably also Morris Jones' theory of an opta-
tival origin for the entire imperfect of P-Celtic[15] (indeed so far as the
ending 2d sg. -ut of Mid. Welsh is concerned Pedersen makes the same
explanation[16])—and, whatever the defects of this view it has at least
the support of modal uses of the imperfect in idiomatic Welsh.[17]   Lastly,
if called on to produce additional instances wherein older optatives
might seem, at least, to have become imperfects or to have influenced
imperfect formations, there are two, which without wholly committing
myself, I should be willing tentatively to advance.   (1) The Tocharian
imperfect of the copula and the verb 'to go', which at least in dialect A
are quite unlike all other imperfects; the forms may be allowed to speak
for themselves in Table 2:

TABLE 2[18]

		Copula		'To go'	
		Toch. A	Toch. B	Toch. A	Toch. B
sg.	1	ṣem	ṣeym (ṣaim)	ye(m)	—
	2	ṣet	ṣait	yet	yait
	3	ṣeṣ	ṣey (ṣai)	yeṣ	yey (yai)
pl.	1	ṣemäs	ṣeyem	—	—
	2	—	ṣeycer (ṣaicer)	—	—
	3	ṣeñc	ṣeyeṃ	yeñc	yeyeṃ

(2) The Indo-Iranic middle secondary endings 2d du. *-ĭthām, 3d du.
*-ĭtām for thematic verbs, as seen in Skt. ábharēthām, ábharēthām, Av.

[13] Meillet, Esq.² 127.

[14] Goodwin, Syntax of the Moods and Tenses of the Gk. Vb.³⁻⁴ §462 (1897?).

[15] J. Morris Jones, A Welsh Grammar Historical and Comparative §171.22.;
§180.4.3; §181.6 (1913).

[16] Vgl. Kelt. Gr. 2. §605.2 (350).

[17] This Morris Jones illustrates (WGr. §171.2.2) among other examples by
rendering Vedic kāmáyēta rā́jā samrā́ḍ bhávitum 'a king would like to be a supreme
ruler' into Welsh as carai brenin fod yn benadur.

[18] The forms are taken from Schulze, Sieg, u. Siegling, Toch. Gr. §461 (1931);
cf. the authors' language at the close of this paragraph: 'Die B-Formen stehen
innerhalb ihres Dialektes nicht so vereinzelt da wie yes and ses in A, denn sie
gehoren genetisch vielleicht zusammen mit der fur B allgemein giltigen Imper-
fektbildung, die mit dem Optativ . . . zwar das stammbildende i (bez. oy) und
die Personalendungen teilt, aber im Gegensatz zum Optativ die Stammform des
Prasenssystems zeigt.'

jasaetəm,[19] as also the corresponding Skt. imperative forms. Of course if this suggestion be adopted, the corresponding primary endings Indo-Ir. 2d du. *-tthai, 3d du. *-ttai seen in Skt. (present) *bhárēthē, bhárētē,* Av. *vīsaēte,*[20] and corresponding Vedic subjunctives must be regarded as analogical; while the historical optative forms Skt. 2d du. *bháryā-thām,* 3d du. *bháryātām* would have to be considered re-characterized extensions of earlier, and once specifically optatival **bharēthām, *bharētām.*

4. If now we are allowed to operate with a special pre-Armenian imperfect of the copula **esim, *esis,* etc., of the origin indicated, it is quite conceivable that beside the older thematic imperfect **eberom, *eberes,* etc. there might arise an analogical competing form, **beresim, *beresis,* etc. Presently the loss of intervocalic *s* and of final consonants would reduce all three persons of the singular of the copula to *ei,* of the new imperfect to *berei,* and of the old imperfect to **eber(e),* the later *eber,* which found a refuge in the aorist, presently to be discussed, as did also the old ipf. 2d pl. **(e)berekʿ* from **eberete + sy . . . .* Such a shift was of course not very different from what had gone on repeatedly in IE times, the reduction to aoristic status of older imperfects beside which there had arisen newer and more highly characterized competing forms.

5. At this juncture, I believe, the further history of the new imperfect became involved with that of the passive. Whether pre-Armenian ever had a complete medio-passive paradigm, and, if so, to what extent semics, prosopics, and prosoposemics[21] were represented therein, must remain rather doubtful; the one reasonably clear instance of a surviving semic is the so-called active imperative 2d sg. *berer,* used only negatively, as *mi berer* 'do not thou carry'. Of this form, to be sure, Meillet holds that the *r* can be nothing but a particle related to Gk. *ρα,* Lith. *ir̃,* originally with a final vowel, and therefore permitting the retention of

[19] Of course if this explanation were adopted, all attempts to connect these endings with the equally puzzling Indo-Iranic athematic middle primary 2d du. **-āthai,* 3d du. **-ātai* and secondary 2d du. *-āthām,* 3d du. *-ātām* would have to be given up; for the conventional view cf. Bartholomae, KZ 29.283 ff. (1888); Brugmann, Gdr.[2] 2.3.601 (1916); Thumb(-Hirt), Hdb. d. Skt.[2] §432 with Hirt's note in the Nachtrag (1930); Reichelt, Awest. Elb. §256 (1909).

[20] Is such an Avestic form as pres. 3d du. *-myāsaite* (Yasna 33.1) an archaism whose origin antedates the spread of an originally optatival vocalism? Cf., however, Bartholomae, in Geiger-Kuhn, Gdr. d. iran. Phil. 1 §120.1; §300.4.

[21] Cf. note 6 above.

the stem-final (interior) vowel.[22] But, bearing in mind that even in so
early a language as Hittite analogical final vowels (particularly to
characterize indicatives and imperatives as against each other) were
added to r-semics (presumably earlier impersonal injunctives),[23] there
is surely no difficulty in supposing that *berer* continues an earlier **bere-
r-o* or the like, which would once have meant 'let there be (no) carrying'
but later came to mean 'do (not) thou carry'. Again, perhaps, the best
recognized prosoposemic is the ipf. 3d sg. *berēr* which Meillet himself,
as we have seen, derives from **bheretor* (= pre-Arm. **beretor*). One is
tempted to suppose that there were prosopics also, e.g., an ipf. (of the
older type) 3d sg. **bhereto*, which would ultimately have given **berē*,
thus falling together with the act. pres. 3d sg., and an ipf. (of the newer
type) 3d pl. **ḫeresinto*, which would later have fallen together with its
active counterpart. But at all events no such forms, if they existed
at all, can have been particularly thriving in the paradigm as a whole;
the most vigorous pre-Armenian passives (passive at least in posse)
were the statives in *i* (or its antecedent: these forms are commonly
compared to such Balto-Slavic statives as Lith. *pa-výdime* [with IE *ĭ*]
'invidemus', OCS *vidimъ* [with IE *ī*] 'we see', or more remotely with the
Indo-Iranic passives in -ya-[24]); these of course immediately underlie the
classical Armenian present passive.

6. Now if the analogy of Hittite and Tocharian means anything,
berēr < **beretor* should originally have had present, or at least non-
preterital value; and, even allowing for considerable deviation of func-
tion under pressure of the competing form *beri*, it is not easy to state how
from being a present medio-passive it could become an imperfect capable
of use in either voice. If we could rely confidently on the one-time
existence of a prosopic middle imperfect, we might suppose that **beretor*
at first took over the passive imperfect function of **bereto*, as the latter
had begun falling together with the act. pres. 3d sg. **bereti* > **berey* >
berē; and only later, influenced perhaps by the falling together of **bere-
sinto* and **beresint* in *berein*, acquired interchangeability of voice.
However this may have been, it is likely that before *berēr* attained its
ultimate status, there had been coined, on the analogy of pass. *berēr*
to active *berē* (I give the forms here in their historic rather than pre-
historic guise merely for convenience' sake), a special passive *berei-r*

[22] Esq.[2] 119.
[23] E.g., ind. 3d sg. *esa-r-i*; ipv. 3d sg. *esa-r-u*.
[24] Brugmann, Gdr.[2] 2.3 §125; Meillet, Esq.[2] 107.

to the new imperfect *berei*, and, like this, capable of use in any person of the singular.

7. Thus the language came to contain the three following very ill-assorted forms: (1) *berei*, act. ipf. sg. in any person; (2) *bereir*, pass. ipf. sg. in any person; (3) *berēr* (earlier passive but later active also) ipf. 3d sg. At this stage apparently a redistribution of function[25] took place: *berēr* being quite naturally at first the preferred, and later the only permissible form for the 3d sg.; *bereir*—influenced perhaps by the negative ipv. 2d sg. *mi berer*, as also by the aorist 2d sg. **(e)berer* presently to be mentioned—being gradually restricted to the 2d sg.; and the remaining form, *berei*, though possessing no special qualification for that function, being restricted by a process of elimination to the 1st sg. In this way the situation was saved for person, but at the expense of voice; now, too, the indebtedness of the thematic verb to the copula was repaid, the latter becoming differentiated into *ei, eir, ēr*.

8. In both categories the 1st pl.—*eak‘, bereak‘*—is noteworthy: (1) because of the disappearance, clearly somehow analogical, of *m* from the ending; and (2) because of the fact that the characteristic vowel is not *i*, but *a*. It is certain too that the two peculiarities must be somehow mutually involved. Perhaps the handbooks have rejected too summarily Bartholomae's attempted identification of Lat. *erās, erat* with Skt. *ásīs, ásīt* in an IE preterital stem **esā(i)-*,[26] so that pre-Armenian would have once have had a complete imperfect on a stem **esa-*, of which but a single form would now be left. Even if this be dismissed, it is, I believe, reasonably certain that pre-Armenian had among its aorist stems a considerable number of athematics in *-i* < IE *ē* and *-a* < IE *ā*; many of these may have been dissyllabic, and in some instances of secondary formation (as is the case in Baltic, to which Armenian here presents something of a parallel); others were monosyllabic and of course primary, as in *edi* < **e-dhēm*; it is not improbable that many of the most common *ē*-aorists (Arm. *i*-aorists) were intrinsically active,

[25] For the possibility of redistribution of functionally overlapping forms, cf. the retention in OIr. of the substantival pl. nom. ending of masc. *o*-stems (IE **-ōs*) as a pl. voc. (*firu*, i.e., [*alfhiru*), as against its complete replacement in the pl. nom. proper by the pronominal ending (IE **-oi*, whence OIr. *fir*).

[26] Bartholomae, Studien zur idg. Sprachgesch. 2.75 (1891); apparently accepted in Hirt, Idg. Gr. 2. §92§2 (1921); Lat. *erās*, etc., are accounted of late and individual origin in Sommer, Hdb. d. lat. L. u. F.[2,3] §345.4 (1914); Brugmann, Gdr.[2] 2.3 §108 end; Stolz-Schmalz, Lat. Gr.[5] (rev. Leumann-Hoffmann) §238 (1928); Kieckers, Hist. Lat. Gr. 2.316 (1931).

and of the $\bar{a}$-aorists intrinsically stative; at all events the disappearance
of m in the 1st pl. is probably due to the disparity of forms revealed in
their progressive development in Table 3.

TABLE 3

		Stage 1	Stage 2	Stage 3
Pres.	sg. 1	*-e(s)mi	-em	-em
	pl. 1	*-e(s)mes + y . . .	-emk'	-emk'
i-Aor.	sg. 1	*-ēm	-i	-i
	pl. 1	*-ēmes + y . . .[27]	*-imk'	*-ik' (!)
a-Aor.	sg. 1	*-ām	*-a	*-a
	pl. 1	*-āmes + y . . .	*-amk'	-ak' (!)

In other words, just as k' was becoming schematized as a sign of plural-
ity, so was m as a sign of the first person of either number, but only in
the present tense. But the resulting 1st pl. forms *-ik' and -ak' fell
together with 2d pl. forms already established, and under these circum-
stances the i-aorists, which appear to have been the more prominent
category, took over the 1st pl. ending of the a-aorists, as did also the
new imperfects, where a similar situation existed.[28] Just how, if at all,
the less prominent a-aorists avoided an ambiguity of person in this
period of pre-Armenian is not clear; how it had ultimately been circum-
vented we shall see later. In the imperfect of the thematic verbs, inter-
changeability of voice too, was now, on the basis of developments in the
singular, established in any plural forms where it did not already exist.
There remains, of course, a possibility that the ipf. of the copula was not,
after all, an optative, but itself an $\bar{e}$-aorist to the base *es; in which event
my remarks on the optative would lose all claim to appositeness; I do
not, however, consider this probable. So much, then, for the Armenian
imperfect.

RELATION OF THE ARMENIAN AORIST ENDINGS TO THOSE OF THE IMPERFECT

9. The endings of the Armenian root-aorist (analogically taken by
the ç-aorists also) are shown in Table 4.

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[27] To postulate the use of a primary ending in pre-Armenian aorists is legiti-
mate enough, in view of the use of Dor. Gk. -μες, Lat. -mus, in secondary tenses;
cf. also §§11, 12 below.

[28] Somewhat different is Meillet's explanation of the loss of m in the 1st pl.
(Esq.² 122).

The origin of these endings is to be sought in the study of the various IE paradigmatic types that have come together in the Armenian aorist,[29] and these include, as I believe, not merely thematic aorists such as 3d sg. *elikʻ* (**eliqᵘet*) and displaced thematic imperfects such as 3d sg. *eber*, 2d pl. *berēkʻ*, but also athematic aorists (in part of secondary origin) in *ē* and *ā*, comparable to those upon which the Baltic preterite has been reformed. If this be admitted, it will appear that the active endings are in a large measure developed from the *ē*-aorists. Thus the 2d pl. -*ikʻ* (probably statistically prevalent over -*ēkʻ* previously mentioned), 3d pl. -*in* transparently continue earlier -*ē-te* + *sy* . . . , -*ē-nt*; in the singular, -*ēm*, -*ēs*, -*ēt* must have fallen together in -*i*, as in *edi*, which, I take it, was eventually limited to the 1st sg. only on the analogy of the development in the imperfect already sketched. These three endings were now substituted for whatever had previously stood in these persons of active aorists of all other types, so that, e.g., to *eber* and *elikʻ* were

TABLE 4

	Sg. 1	Sg. 2	Sg. 3	Pl. 1	Pl. 2	Pl. 3
Act.	*beri*	*berer*	*eber*	*berakʻ*	*berikʻ* or *berēkʻ*	*berin*
Pass.	*beray*	*berar*	*beraw*	*berakʻ*	*beraykʻ* or *berarowkʻ*	*beran*

developed the 1st sg. **eberi*, **elikʻi* (the later loss of augment except in forms which otherwise would be monosyllabic, and the still later loss of preaccentual *i* in the second example, leading to the historical forms *beri*, *klʻi*, do not concern us here). In the 2d sg., apparently on the analogy of the imperative (*mi*) *berer*, arose the form **eberer* (with later loss of augment). Conversely, and probably before the loss of augment, original *ē*-aorists underwent an analogical differentiation of person in the singular, e.g.,into 1st sg. *edi*, 2d sg. *eder*, 3d sg. *ed*. The -*a*- of the 1st pl. I have attempted to explain in §8 above.

10. The passive of the root-aorist is based, I take it, on surviving *ā*-aorists originally of stative connotation, although certain of its forms have been subjected to a late and rather limping reformation. The stem-final *a* came to be schematized as a passive sign, although the corresponding *i* of the active forms is not schematized as a sign of voice (unless possibly in the 3d pl.), but rather as a personal ending or part thereof. The passive 1st sg. -*ay* and 2d pl. -*aykʻ* presumably represent such stems in -*a*- plus the apparent endings -*i* and -*ikʻ* abstracted from

[29] Meillet, Revue des études armeniennes 10.183 (1930); Esq.² 124.

the active forms; the 2d sg. *berar* is an adaptation of active *berer* so changed as to contain the passive sign, and from this again is formed, on the analogy (although imperfectly so) of the personal pronouns 2d pl. *dowk'*, the 2d pl. *berarowk'*. Of the remaining forms, 1st pl. *-ak'* and 3d pl. *-an* are transparently clear continuants of pre-Armenian forms of the *a*-aorist, and even the 3d sg. *-aw*, although Meillet and others see in its *w* a survival of the element seen in Skt. pf. 3d sg. *jajñā́u*, Lat. *nōv-it*, Toch. A (pt. 1st sg.) *täkwa*, etc., I am disposed to regard as a regular continuant of earlier *-āto* (a prosopic aorist), showing apparently a special development of intervocalic *t* when the including vowels are both non-palatal, as against the *y* which develops in a more or less palatal vocalic environment; cf., perhaps, sg. gen. *hawr* < pre-Arm. **patoros* (!) as against sg. nom. *hayr* < IE voc. **pəter*.[30]

3. THE IRISH IMPERFECT

11. The ambiguity which favored the reconstitution of the Irish imperfect resulted from the use of secondary endings in presents compounded with preverbs or quasi-preverbial particles (the so-called 'conjunct inflection'). Whether in following this practice the language was merely carrying out almost to a logical extreme a tendency already present in posse in archaic Indo-European, or had struck out on a new path, need not concern us here; at all events such a schematized distribution seriously interfered with the use of either series of endings to designate tense distinctions as such. Of the endings found actually in use, there are two whose origin seems fairly clear: the (thematic) 3d sg. *-ed* can be derived in strict compliance with Irish sound-laws from a prosopic medio-passive **-eto*, its use as an active is at least no more remarkable than that of OCS *-tъ* (< **-to*)[31] in nearly all (active) presents and some (active) aorists,[32] or of *-aw* in the NArm. aorist (cf.

[30] Many points affecting the development of IE *t* in Armenian are obscure (cf. Brugmann, Gdr.² 1. §577); Meillet, Esq.² 33). If the suggestion here made is pertinent, then the derivation of sg. abl. *-oy* < **-o-tos* (Brugmann loc. cit.) would have to be given up, and the form regarded as an analogically used genitive; on the other hand, sg. instr. *-aw* could be derived from IE **-ā-to(s)*, cf. Hit. sg. abl. *anaz* (Sturtevant, Hit. Gr. §§196-7 [1933]), rather than from **-ā-bhi*, as is generally done.

[31] So Hirt, Idg. Gr. 4 §46 (1928).

[32] Further details as to the use of *-tъ*), rather than acceptance of Hirt's view of its origin, are found in Vondrak(-Grümenthal), Vgl. Slav. Gr.² 2.126 (1928); N. v. Wijk, Gesch. d. aksl. Spr. 1.213–4 (1931); P. Diels, Aksl. Gr. §108 and anmm. 2, 3 (1932).

the paradigm *beri, berir, beraw; berink', berik', berin*), to say nothing of OArm. *berēr*, and the 2d sg. *-th(e)a*, which Pedersen derives from an IE medial prosope **-thās* (an assumed by-form to **-thēs*)[33] and Kieckers regards as a contamination of **-thēs* with the act. pf. 2d sg. **-tha*.[34] In fact, it is only Thurneysen who fails to except even these two endings from his sweeping assertion that the endings of the imperfect are un-explained.[35]   Pedersen goes on to explain the remaining forms as old imperfects (though with primary ending *-mes* in the 1st pl.) plus a parenthetical enclitic **est*, not too well motivated but meaning appar-ently some such thing as 'it's a fact' or 'that's the whole story'.   His explanation satisfies the requirements of the sound-laws reasonably well, and he is right, I believe, in recognizing the presence of an enclitic element of some sort,[36] although, as all his reconstructed forms are actives, if we accept them, we must suppose that their use in the de-ponent inflection, and even, in one instance—the 3d pl. *-tis-* in the passive is analogical and secondary, a shift of meaning rather less common, I believe, in the IE languages than would be the reverse.

12. It is certainly legitimate to attack the endings simply from the standpoint of the sound-laws, with no preconceived ideas as to the semantic or structural peculiarities we may encounter. If now we consider two of the most baffling of the endings, 1st pl. *-mis* and 3d pl. *-tis*, it is apparent that both imply a pre-Irish palatally colored con-sonant (or group) plus an unaccented vowel plus a palatally colored *ss* (a single *s* would of course have been lost by lenition) plus a final palatal vowel.[37]   One of these endings may be analogical; both cannot well be. Operating with the 1st pl., we may begin, purely to satisfy the sound-laws, by writing **-messe*, but, once written, the semantics of such an ending become transparently clear. It is **-mes-se*, a periphrastic medio-passive, consisting of an active ending plus an old reflexive pronoun (= Gk. ἕ, enclitic ἑ, but with the indifference to person still observable in the Homeric use of the corresponding possessive ὅς, ἑός, as also in its Indo-Iranic and Balto-Slavic cognates), and is almost exactly comparable to the Lith. reflexive 1st pl. *-mė-s*.   That it should

[33] Vgl. Kelt. Gr. 2 §605 end.

[34] IF 34.408-10 (1915).

[35] Hdb. d. altirischen 1. §579 (1909); in §87, however, he speaks of *bered* as being 'vielleicht aus **bhereto*'.

[36] Vgl. Kelt. Gr. 2 §605; I do not, however, understand Pedersen's insistence that the enclitic element 'muss mit einem Vokal . . . angelautet haben'.

[37] Cf. Thurneysen, Hdb. d. altir. 1 §97, §98.1; §152; §154; §87.1.

contain a primary rather than a secondary ending is not remarkable in view of the distribution that obtains in Irish: a hypothetical *-me-se would have fallen together with the analogically extended primary *-mesi seen in the present active simplex 1st pl. *bermi*; which fate, indeed, befell the 2d pl. *-te-se, so that it is no longer distinguishable from its present simplex counterpart seen in *berthe* (< *beretesi* following 1st pl. 1 *berom(m)esi* ?).[38] The 3d pl. -tis, implying as it does a pre-Irish *ss*, must of course be analogical to the 1st pl.[39]

13. To be sure, had the pronominal character of the appended *se* continued to be realized, directly a preverb was applied, *se* must have taken position between this and the verb (cf. Lith. *kělěmė-s* 'we raised ourselves' [imperfective], but *at-si-kělěmė* [perfective], OIr. *no-s·bered* 'he was carrying it' Tur. 134 [the infixed pronoun is here of course not reflexive]); indeed, it would presently have required a preverb, even a colorless one, for its support. Rather, *se* appears not so much to have been schematized as a sign of voice, as to have become an integral part of certain endings felt in their entirety as medio-passive. Once thus incorporated, it no longer possessed any individual functional importance that might conceivably have sheltered it in the slightest degree from the ordinary vicissitudes of phonological history— its *s* might be lenited out of existence (as in the 2d pl.), be analogically geminated (as in the 3d pl.), or even participate in a metathesis. For, despite the rarity of this last phenomenon in Old Irish,[40] we may close with the suggestion that an older 1st sg. *(e)bherom se*, after first becoming *beronse*, then became *berosne*, whence OIr. ·*berinn*.[41]

[38] The analogical origin here suggested for the simplex pres. 2d pl. -the does not, to be sure, entirely account for its final vowel being *e* rather than *i*.

[39] The development of analogical 3d pl. -tis rhyming with 1st pl. -mis was doubtless favored by the parallel pair 3d pl. -tar, 1st pl. -mar (prosoposemics) in the conjunct deponent inflections; probably only when -mis, -tis, though still felt as primarily medio-passive, began being used actively did -mar, -tar begin to appear in the act. preterite. Later still, at the beginning of MIr. times, the tendency toward rhyme between the 1st pl. and 3d pl. endings in any one tense led to the use in the present (simplex) of 1st pl. -mit (> NIr. -maid, etc.), although its *t* was really a suffixal object pronoun, to match 3d pl. -it < *-onti, etc.

[40] Thurneysen, Hdb. d. altir 1 §179; Pedersen, Vgl. Kelt. Gr. 1 §334 (1909).

[41] Cf. *bronn* < *brusnos*, etc. (Thurneysen, Hdb. d. altir. 1 §148a). MIr. 1st sg. -ind is of course purely orthographical, basing on a confusion due to the sound-change by which the historic group *nd*, though still often so written in MIr., had become *nn*; cf. Dottin, Manuel d'irlandais moyen 1 §11 (1913): the NIr. orthography is everywhere *nn*.

14. The deponential, and in one instance the passive, use of these endings follows immediately from their structure; their active use followed the analogy of the 3d sg. *·bered*, with which they had come to be associated paradigmatically: tense had been saved at the expense of voice. Except in this tense and the two which analogically accept its endings,[42] other types of medio-passive endings (above all prosoposemics)[43] came to dominate the Irish deponent and passive.

[42] Cf. note 1 above.
[43] Cf. note 6 above.

ITALIAN ETYMOLOGICAL NOTES

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[Etymologies are offered for: *aduggere* 'to irritate, anger'; Sien. *asciunare* 'to gather' and dialectal cognates; *attraccare* 'to draw a boat to shore'; *bifolco* 'cow-herd'; *coccolarsi* 'to squat; to enjoy oneself'; *dunque* 'therefore'; *elce* 'holm-oak'; *incignare* 'to begin'; *infolcarsi* 'to interfere, meddle'; *ischio* 'oak'; *lazzo* '(stage) trick, gag'; *mucca* 'milch-cow'; *pozzanghera* 'mud-puddle'; *uggio* 'disgust'; also for Span. *mozo, muchacho*, Port. *moço* 'boy'.

These etymologies are divided into two groups: those involving contamination or the like, and simple etymologies.]

I. ETYMOLOGIES BY CONTAMINATION

1. *aduggere* 'to irritate, anger'; *uggio* 'disgust, displeasure, nausea'. These words are not usually listed together, despite the kinship of meaning. Meyer-Lübke[1] lists *aduggere* under *adūrere*, with no mention of the phonetic difficulty of deriving *-ğğ-* from the Lat. *-r-*. *Uggio* is usually considered to have come from *odium*,[2] but roundabout ways have been resorted to in order to explain the initial *u-*.[3]

Despite Salvioni's opinion (RDR 4.100) that influence from *odium* is an unnecessary assumption in the case of *aduggere < adūrere*, it is necessary for both the phonological and the semantic aspects. From the Italian point of view, it is best to regard both *uggio* and *aduggere*

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[1] REW³ §212.

[2] Grandgent, From Latin to Italian 31 (Cambridge, 1927; hereinafter referred to simply as 'Grandgent'; other books by the same author will always be referred to by their own titles), with question mark. Meyer-Lübke (REW³ §6038a) fails to list it in this connection, but puts it under *ūrere* (§9081), again with no explanation of the curious phonetics. (Ever since Castelvetro it has been recognized that *-r- > -r-* is 'lautgesetzlich' in Italian; the *-gg-* in forms like *chieggo = chiedo = quaerō*, etc., is not phonological but analogical. Cf. Grandgent 122, Meyer-Lübke, Grammatica Storica della Lingua Italiana 177 [tr. Bartoli and Braun, Torino, 1931; hereinafter referred to as ML].)

[3] E.g., as taken over from the first syllable of *uggioso* 'disgusting' < *odiōsus*, with dialectal development of *o > u* in pre-tonic syllable: Grandgent 31, 44; ML 40.

as belonging to one root: *uğğ-* 'to irritate, anger', a fusion of *ūr-* 'to burn' with *odį-* 'to hate'. Thus *odium* gave **oggio*, then *uggio* with *u-* from *ūrere*; whereas *adūrere* gave *aduggere* with *-ğğ-* from **oggio* or *uggio*. For the semantic relationship and use of *urere* in the meaning 'to anger', cf. *meum iecur urere bilis*, Hor. Sat. 1.9.66; *ira quidem communiter urit utrumque*, Hor. Ep. 1.2.13; *uro hominem* 'I annoy the fellow', Ter. Eun. 274; cf. also Eng. *that burns me up* 'that angers me greatly', etc.

2. *attraccare* 'to draw a boat to shore'. Meyer-Lübke's derivation of this word and its cognates (Cat., Span., Port. *atracar*)[4] from Low Ger. *trekken* 'to draw' is hardly acceptable on either phonological or geographical grounds, in view of the primarily Mediterranean distribution of this group. *Attraccare* and cognates are much more likely simply a contamination of *attaccare* 'to attach'[5] with *trarre* 'to draw, pull' or their respective equivalents in the other Mediterranean Romance languages. We have here the confusion between an action and the purpose for which it is carried out (*attraccare* = 'to pull in order to attach'), which is frequent in contaminations.

3. *dunque* 'consequently, therefore'. The attestation of Lat. *dunc*,[6] apparently the etymon of Ital. *dunque* and cognates,[7] has not answered the problem of their ultimate origin. The various etymologies based on *dōnec*, *dōnique* or *dum* fail to take account of the grammatical and semantic differences between these words (subordinating conjunctions meaning 'until') and the Romance group (adverbs meaning 'then, therefore, well then'). One cannot assume a transition from the meaning 'until' to the directly opposite meaning of 'finally, at last'—an etymology of the lucus a non lucendo type.

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[4] REW³ §8873.

[5] Etymon suggested by De Gregorio, Studî Glottologici 8.303, but without explaining the *-r-*, whose presence it is our purpose to explain.

The opinion is ascribed to Coromines, Homenatje a Rubió y Lluch 3.283 (I have been unable to check this reference) that It. *attraccare* is from the Catalan. However, it is difficult to explain Italian [k:] from Catalan [k], whereas the Iberian forms on the other hand point to an original double consonant as the source for intervocalic [k]. In any case, the problem of the intrusive *-r-* remains the same.

[6] Zimmermann, ALLG 5.567.

[7] See REW³ §2795. For the various etymologies proposed, references, and discussion, cf. Wartburg, FEW 3.179; Walde-Hofmann, LEW 1.371, 381, s. v. *dōnec, dunc*. *Dēnique* as an etymon was suggested by Förster, RF 1.322–325, but without sufficient explanation of Rom. *-ǫ-* in place of *-ę-*; cf. Paris' criticism of Förster, Romania 12.133.

The prevailing meanings of the Romance group are two:[8] temporal 'then' as an adverb, in Fr. and OProv., and deductive 'therefore, as a consequence' as adverb or conjunction, in Fr., OProv. and Ital. The latter use is more common everywhere, and practically the only one in Italian.[9] *Dunque* and cognates, since they combine the meanings 'denique' and 'tunc' and at the same time their form, are most simply to be explained as the normal continuation of *denique*, with vowel from *tunc*, giving a prototype **dunque*, which then developed a by-form *dunc* parallel to *atque* ~ *ac*, *neque* ~ *nec*, etc.[10] Since *tunc* was mainly replaced in Romance by other forms such as *allora*, etc., the chief meaning preserved in the new form was that of *denique* 'finally > as a consequence'.

4. *ęlce* 'holm-oak'; *ischio* 'oak'. Another example of cross-contamination is that of *īlex* 'holm-oak' and *aesculum* 'winter-oak'. *Ischio < aesculum*, with *i-* instead of the normal *ę* from *ae*, has been left unexplained,[11] even in Meyer-Lübke's treatment,[12] which is rather a petitio principii, assuming an **ęsclu* to explain Ital. *ischio* and then using this example on which to base a phonetic law of *i < ę* before *-skị-*.[13] There

[8] Meyer-Lübke, Grammaire des Langues Romanes 3.§222, §485, §558 (New York, 1923, reprint; hereinafter referred to as Rom. Gramm.).

[9] The examples cited by Meyer-Lübke (Rom. Gramm. 3.§558) from the Divina Commedia and elsewhere as showing temporal use of (*a*)*dunque* are all capable of interpretation as 'deductive' adverbial or conjunctive use. The passage in Inf. 22.64 (*Lo Duca*: '*Dunque or di* '...') is punctuated differently by different editors; in some editions *dunque*, in others *or*, begins the words spoken by Vergil. For this type of use in the earliest OProv. also, cf. Boecis 110: *e cum es velz, donc estai bona ment* 'and when he is old, then (at last) he is well off'.

[10] Rom. Gramm. 3.§483. According to the explanation offered above, therefore, Lat. *dunque* must have been prior in formation to *dunc*, not vice versa as assumed by Meyer-Lübke (Rom. Gramm. 2.§626, Ital. *dunque* and Fr. *donc < dunc + que*).

[11] Grandgent 25.

[12] ML 18, 44.

[13] The other examples cited in support of this law (ML 44; followed by Grandgent 23) are also weak; *mischia* 'mixes' < **misculat*, being a verb-form, is subject to analogical influences from forms with original *-ī-* such as the form *mīxtus* (> It. *misto*); *vischio* 'bird-lime' < *visculum* had original *-i-* (*vīscus* 'bird-lime', *vīscāre* 'to besmear'); *biscia* 'snake' directly < *bēstia* 'beast' is phonologically, as well as semantically, difficult, as recognized by Meyer-Lübke, REW[3] §1061. Among other considerations, moreover, the parallel back vowel *-ŭ-* is not checked in its normal development by following *-skị-* or *-stị-*, cf. *angŭstia > angǫscia*.

For *biscia*, cf. Tuttle, RR 6.344 (× *vīpera*, probably the best explanation). Rohlfs, ZRPh 41.354 f.; 52.74–5, contributes nothing new to the problem.

is, on the other hand, some evidence for regarding *ę* from *ẹ* before -*skị*-
as a regular development, cf. *tęschio* < *tĕstula*[14] (the form *tęschio* having
doubtless received its *ę* through the influence of *tęsta*). In all proba-
bility, *ischio* received its *i*- from *īlex*, whereas the influence of **ẹschio*
(< *aesculum*) led to the opening of *i*- to *ę*- in *ęlce* and cognates. Like-
wise, *ęlcina* 'holm-oak' is more simply explained as a direct derivative
of *ęlce*, without recourse to the **ilicīna* postulated by Meyer-Lübke.[15]
There seems to be no justification for Meyer-Lübke's assumption of an
(Osco-)Umbrian **ēlex* beside Lat. *īlex* from an Italic **eilex*,[16] since no
such form is attested in any of the Italic dialects; moreover, Italic **ei*
developed to a long OPEN *ę* in Umbrian, fusing with the result of **ai*;[17]
we may assume that an Umbrian *ę* would have developed in Romance
like VL *ę*, which is insufficient to explain the *ẹ* of *ęlce* and cognates.

Walde-Hofmann's suggestion[18] of influence from *ēligō* (following
Isidor of Seville 17.7.26, '*Ilex* ab *electo* vocata'), by way of popular
etymology, seems doubtful; it is not certain how far Isidor's etymol-
ogizing should be taken as representative of truly popular attitudes
towards language, nor is there any semantic connection between *ēligere*
and *īlex* to render contamination likely, such as there is between *īlex*
and *aesculum*. (For a similar case of contamination between tree-
names, *alnus* × *ulmus*, cf. Salvioni, Arch. Gl. It. 15.453–4.) Isidor's
etymology and the Late Latin attestations of the form *elex* simply show
that the associative change had already taken place.

5. *incignare* 'to begin'. Caix[19] and, more recently, Jaberg[20] have
derived this word from *encaeniare* 'to hallow, to wear (a garment) for
the first time'. Neither Caix nor Jaberg mention the phonetic difficulty
of -*i*- instead of the normal -*ę*- before [ñ]. This must be explained on

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[14] Grandgent 25.

[15] REW³ §4263; cf. also Menéndez Pidal, Romania 29.357.

[16] Meyer-Lübke and d'Ovidio, Gröbers Grundriss² 1.445, 464 (Strassburg, 1907);
followed by Ernout, Les éléments dialectaux du vocabulaire latin 156 (Paris,
1909; for attestations of a Late Latin *elex*); REW³ §4259; Ernout-Meillet, Dict.
étym. de la langue latine 452 (Paris, 1932); Rohlfs, ZRPh 46.158. The last-
mentioned cites other examples of an assumed Osco-Umbrian *ē* for Latin *ī* in the
South Italian dialects—which can all be explained, however, on other grounds.
*Vēpera for *vīpera* (seen in Basilicata *vępərə*) appears to be another case of recip-
rocal exchange of tonic vowel, cf. *biscia* with -*ī*- from *vīpera* (above, fn. 13).

[17] Buck, A Grammar of Oscan and Umbrian² 44 f. (Boston, 1928). I am in-
debted to Professor Buck for his assistance in this connection.

[18] LEW 1.678 (Heidelberg, 1936).

[19] Studi di etimologia italiana e romanza §359 (Firenze, 1878).

[20] Revue de linguistique romane 1.122.

the basis of contamination, doubtless with (*in*)*cingere* 'to gird (oneself) > to prepare > to begin' (a frequent semantic development, cf. *cingitur ... in proelia*, Verg. Aen. 11.486), which develops normally to -*cignere*.[21] It is worth noting that the -*i*- in *cominciare* is likewise unexplainable on a phonetic basis as directly < *cum-ĭ-nĭtiare*, and a similar influence must be assumed.

6. *mucca* 'milch-cow'. Rice,[22] in rejecting Meyer-Lübke's derivation[23] of this word from an onomatopoetic **mucca* (= *mū* onomatopoetic × *vacca*), suggests connection with VL **mŭccus* 'nasal mucus' (for CL *mūcus*), and from the semantic angle suggests comparison with *mocci-chino* 'dirty-nosed, whimpering baby'. But all the Italian derivatives of VL **mŭccus* (*moccio* 'mucus'; *moccolo* 'mucus, (dripping) candle'; *moccicone, moccichino* 'dirty-nosed baby')[24] show the normal development of *ŭ* > *ǫ*; so that any relationship of *mucca* to this group is rendered phonologically unlikely. As for the semantic aspect, we fail to see the connection between 'milch-cow' and 'mucus';[25] exactly what is the parallel between a dirty-nosed baby and a cow?

Both the above etymologies are wandering too far afield; the explanation seems to lie considerably nearer home. The obvious answer is a contamination of *vacca* 'cow' with the first syllable of *mungere* 'to milk' (< *mulgere*, with normal Tuscan development of *ŭ* > *u* before *n* + guttural or palatal[26]), as a conscious or unconscious Spoonerism.

[21] Grandgent 110.

[22] LANGUAGE 11.240.

[23] ZRPh 32.498; REW³ §5709.

[24] *Moccio* may have gotten its -*čč*- from the plural, as Meyer-Lübke suggests, or else may come from **mŭcceus* (REW³ §5707). Related to the Italian words from this latter source (It. and It. dial. *mozzo*, etc. 'servant-boy', see Puşcariu, Jahresbericht des Instituts für rumänische Sprache zu Leipzig 11.108) are also Span. *mozo*, Port. *moço* 'young; boy' and Span. *muchacho* 'boy', rather than to *musteus* 'musty' and *mutilus* 'mutilated' respectively. *Musteus* in all other cases (REW³ §5779) gives words like It. *moscio* 'flabby, soft', etc., showing a different line of semantic development. Span. *mozo*, Port. *moço* are better understood as normal developments from **mŭcceus*, with the same semantic change as that pointed out by Puşcariu for the It. forms, namely 'Rotzbub > Junge > Knecht' (It. *moccichino, -one*, etc.).

In deriving *muchacho* from *mutilus*, the difficulties are both semantic and phonological (as recognized by Meyer-Lübke, REW³ §5791). OSp. *mochacho* furnishes a key to the problem; we have here a formation on *mozo* with the suffix -*acho* (cf. Rom. Gramm. 2.§420), first **mozacho*, then *mochacho* with assimilation of -*z*- to the following -*č*- (conversely, therefore, to the explanation offered in Rom. Gramm. 1.§513).

[26] Grandgent 28.

In Tuscany, the contamination must have taken place after the time
of the normal change *ŭ* > *ǫ*, for an earlier **mŭcca* would have given
*mocca. Assumption of influence from *mulgere* is necessary because
of the meaning 'milch-cow', and is confirmed by Romagn. *moca*—the
word shows *u* in Tuscany, where the *ŭ* of *mulgere* remains, and *o* outside
of Tuscany, where *ŭ* before *n* + guttural or palatal does not remain as
such. By the same token, Romagn. *moca* disposes of Meyer-Lübke's
onomatopoetical *mū-cca*.

7. *pozzanghera* 'mud-puddle'. The first part is obviously connected
with *pozza* 'mud-puddle', but the second element is not clear. Caix'
derivation from **puteacula*[27] suffices only to explain the by-form *poz-
zacchia* (*pozzaccia*, Petrocchi 2.575, is of course simply a normal pejora-
tive to *pozza*). **Puteacula*, however, will not explain either the *-n-*
or the *-g-* of Ital. *pozzanghera*; Meyer-Lübke[28] leaves it with the remark
'mit unerklärtem Ausgang'.

Outside of the depreciative suffix *-era*, the element *-ang-* remains to
be explained; we suggest that this element is due to crossing with *fango*
'mud'. To Emil. *pociacra* would correspond It. **pozzacchera* (not at-
tested, but cf. *pillacchera* 'mud-spot' to **pilacco*, Calabr. *pilaccu* < Gk.
pēlos, REW³ §6380), which, crossed with *fango*, > *pozzanghera*.

II. OTHER ETYMOLOGIES

8. Sienese *asciunare*; Old Venet., etc., (*as*)*sunar*; Old Paduan, etc.,
arsunar 'to assemble, gather'. That this group belongs with *adunare*
(of the same meaning), the normal development of Lat. *adūnāre*, was
recognized by Meyer-Lübke,[29] but no adequate explanation has been
offered for the dialectal forms with *-s-* or *-š-*. Meyer-Lübke's sugges-
tion of influence from *assonare* is weak on the semantic side. **Exūnāre*,
suggested by Salvioni,[30] is likewise weak semantically, and also calls
for further explanation with regard to the prefix.

The only etymon under which this group can be brought together is
*ad-se-unare 'to gather to oneself', a normal parallel construction to
ad-unare. On this basis we can explain the *-š-* in Sien. *asciunare* as the
normal development of *-ssi̯-* (< *-dsę-*);[31] the other forms show elision
of the *-ę-* in hiatus and consequent formation of a type **adsunare*, present

[27] Studî §459.
[28] REW³ §6877.
[29] REW³ §209.
[30] Arch. Gl. It. 16.430.
[31] Grandgent 105.

in Old Venetian *assunar*, Old Paduan and Old Vicentine *arsunar* (with
-*r*- < -*d*- before *s*[32]), and, without the prefix, in Old Milanese, Old
Venetian and Veronese *sunar*.

9. *coccolarsi* 'to squat; to enjoy oneself'.   Caix,[33] followed by Meyer-
Lübke,[34] connects this word, its derivative *coccoloni* 'squatting, having
a good time' (adv.) and Romance cognates, with the onomatopoetic
root *cloc-*, *gloc-* (Lat. *glōcīre*) 'to cluck'.   The semantic transition as-
sumed—through the meanings 'to cluck > to sit in the position of a
brooding hen > to squat'—is quite unlikely.   Petrocchi,[35] however,
gives further meanings in the direction of 'to rest, to take life easy',
etc.; the central meaning thus obtained is more nearly 'to rest < to
squat'.   Because of the meaning, we venture to connect *coccolarsi* with
*cocculum, a diminutive and depreciative formation (*coccolarsi* has a
distinctly contemptuous nuance) on *coccyx* '(rudimentary) tail, base
of the spine'.   The original meaning must have been 'to squat on one's
tail'; influence from *collocare* (*se*) 'to place (oneself)' is possible but
doubtful.   The formation is late, as indicated by the presence of the
intertonic vowel in Italian and especially by the -*cl*- in Spanish (*en*)
cuclillas.

10. *infolcarsi* 'cacciarsi, impacciarsi in alcuna cosa'.   Meyer-Lübke[36]
follows Caix[37] and Pieri[38] in listing *infolcarsi* as derived by metathesis
from *ingolfare* : Gk. *kólpos* 'bay, gulf'.   Several dictionaries (Petrocchi
1.1212; Fanfani, Vocabolario dell' uso toscano 489 [Firenze, 1863]) give
also the meaning 'ingolfarsi', possibly under the influence of the above
etymology.   But origin from *ingolfare* is phonetically improbable, both
because of the assumed unvoicing of *g*, and because of the unlikelihood
of the presumed metathesis, especially as no liquids or nasals are directly
involved.

This word is more likely one of several which are traceable to the root
fŭlc- in the meaning 'to push, drive, thrust' (in all probability the same
root as that seen in *fŭlcire* 'to support', pple. *fŭltus*, and *infŭlcire* 'to

[32] A dialectal development; cf. Grandgent, Introduction to Vulgar Latin 119
(Boston, 1907).

[33] Studɨ §292.

[34] REW[3] §3795; cf. also Menéndez Pidal, Romania 29.344, on Span. *en cuclillas*.
Direct connection with Lat. *glōc-* is particularly unlikely in view of the disparity
between the initial consonants.

[35] Nòvo dizionario universale della lingua italiana 1.494 (Milano, 1894).

[36] REW[3] §2059.

[37] Studɨ §362.

[38] ZRPh 30.300.

thrust in'; the two meanings are very close, cf. architects' use of the term 'thrust' with regard to supporting pillars). Here the phonetics are without difficulty, and the meaning 'to push, thrust oneself in > to meddle' fits perfectly.

Similarly, there seems to be no reason why *folto* 'thick, crowded' should not be derived directly from *fŭltus* in the meaning 'pushed, pressed > compressed, crowded', rather than through the compound *infŭltus*, with Meyer-Lübke.[39]

Another group of derivatives from this root and meaning are the Latin words in *-bŭlcus* meaning '-herd, guardian of': *bubŭlcus, subŭlcus,* originally meaning doubtless 'cow-driver', 'swine-driver'. That the *-b-* of these words must come from Italic *-bh-*, thus permitting connection with the Latin root *fŭlc-* 'to drive', would seem to be indicated by Italian *bifolco, bofolco,* which point to an Osco-Umbrian cognate of *bubulcus* with *-f-*;[40] Italic **bŭ-bhŭlc-os.* The Italian form with *bi-* doubtless arose by ultra-correction of the form with *bo-*, as a reaction against the labializing development seen in *domani < dē mane, somigliare < similiāre,* etc.; cf. *dimestico* by ultra-correction of *domestico* and other cases.[41]

11. *lazzo* '(stage) trick, gag'. Meyer-Lübke[42] accepts Zingarelli's suggestion[43] of *actiō* as etymon for the derivation (necessarily learned, according to this hypothesis) of *lazzo* 'stage trick, "business", practical joke', a term occurring primarily in connection with the commedia dell' arte. Such a learned origin for the term is unlikely, in view of the social and intellectual status of sixteenth and seventeenth century actors. They were much more likely to have taken a word from their own dialect, rather than to have Latinized over the homely business of acting. The commedia dell' arte is generally regarded as having originated at Venice and Padua, and in the north of Italy generally,[44] and most of the actors in its earliest days came from Northern Italy.[45] This lends sup-

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[39] REW³ §4414.

[40] Ascoli, Miscellanea Caix-Canello 428 (Firenze, 1886); cf. also Ernout, Éléments dialectaux 131; Meyer-Lübke, REW³ §1355, both of whom consider the second element of *bubulcus* as unexplained.

[41] Grandgent 42.

[42] REW³ §116.

[43] Vocabolario della lingua italiana 835 (Milano, 1917).

[44] Lea, Italian Popular Comedy 230 f. (Oxford, 1934).

[45] For example, in the list of members of the company of the 'Gelosi' (Lea 261 f.), of the eleven members of the company, seven came from northern Italy, three from Bologna, and one from Florence.

port to the view here advocated,[46] that *lazzo* is simply the North Italian form corresponding to Tuscan *laccio*, Span. *lazo* < *laquẹus* 'snare, loop'.

The semantic development must not, however, have been through the meaning 'string, bond (of the plot)' as assumed by Lea, following Riccoboni—despite the apparent parallel of Skt. *sūtra-* 'string, wire' in *sūtra-dhāra-* 'wire-puller = stage-manager'. In the latter, the term arose through comparison with the manipulator of marionettes or the like, whereas the lazzi of Italian popular comedy are anything but links or bonds in the plot. On the contrary, they are episodic in nature and, if anything, destructive of continuity. The development of meaning must have been rather 'snare > catch, gag > stage-business, dumb-show'; cf. Eng. *catch*, *gag* in the same sense. The underlying comparison in both cases is that of a joke conceived as something wherewith the audience is ensnared.

The other words used in sixteenth and seventeenth century Italian texts as equivalents for *lazzo* (*azzo*, *atto*) are to be explained, the first as derived from *lazzo* by apheresis, the second as a Latinism in an attempt to connect the word with *actus* or *actiō*.

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[46] Quoted by Lea (66) from Riccoboni, Histoire du Théâtre Italien.

I am indebted to Mr. Harold M. Barnes, Jr., for his assistance in checking references and for valuable suggestions.

THE VOWELS OF THE BADAGA LANGUAGE

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The Badagas of the Nilgiri Hills in South India are a community numbering some 40,000 and comprising seven sub-castes.[1] They are known to be immigrants from Mysore state, having appeared on the Nilgiris some five or six centuries ago. Their language is certainly an offshoot of Kannaḍa, as is shown by its having in common with modern Kannaḍa among other features initial *h* instead of *p* of other Dravidian languages. A. N. Narasimhia, in The history of *p* in Kanarese,[2] has demonstrated for Kannaḍa that *h*- appeared first in inscriptions in the language in the 10th century A.D. and by the 16th century had established itself in inscriptions in almost all words. In the 13th century *h*- < *p*- had already begun to disappear and has now entirely disappeared in the uneducated vernaculars; we have no information whether this is the case in all the local vernaculars. In the Badaga language this *h*- still remains, but in the absence of a dialect atlas for Kannaḍa this survival of *h*- is of no use in dating the advent of the Badagas in the Nilgiris. The Badaga language is said by speakers of it to have different dialects, but no work has been done except on that spoken in the neighborhood of Kateri. Enough work has been done by the writer on this one dialect of Badaga to permit a short treatment of phonology and especially of the vowels.

The consonant phonemes known at present are: *p, b, m, t,*[3] *d, n, ṭ, ḍ, ṇ, č, ǰ, k, g, ŋ* (it is uncertain whether this is not a positional variant of *n*), *r, l, ḷ, s, ʃ* (not enough material is at hand to make the separation of these two sibilants quite certain), *v, y, h.* All of these except *r* and *h* appear both short and long. No complete account of distribution is possible. That of *h* shows most peculiarities. It appears only in initial position and on this account might be considered to be in com-

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[1] This paper represents a small part of the work done in South India in 1937–8 with the aid of the American Philosophical Society (Penrose Fund).

[2] BSOS 8.673–80.

[3] Short *d* and *g* in intervocalic position are voiced fricatives. *t* and *d* are pure dentals, *n* is post-dental, *ṭ, ḍ, ṇ, ḷ* are retroflexed fairly strongly.

plementary distribution with some other phoneme, e.g. *p* of other positions. However, a few words appear with initial *p*; consequently, *h* must be evaluated as a different phoneme from *p*.

The vowels form the most interesting section of Badaga phonology. Five qualities appear: *a, e, i, o, u*. Each of these appears in two quantities, short and long. Furthermore, three categories of resonance are found for each vowel quality in both quantities, viz. normal, half-retroflexed, fully-retroflexed.[4] In the first of these no difference can be detected from the formation of the vowels in other better-known languages. In the second, which I call half-retroflexed, every vowel is produced with the edges and the tip of the tongue retroflexed or curved upward to approach the alveolar ridge, but without touching or causing friction at any point; the front of the blade of the tongue seems to be raised also in this manner of vowel-production. In the vowels with fully-retroflexed resonance the whole tongue is strongly retracted, the edges are curved upwards towards the hard palate well behind the alveolar ridge but without touching or causing friction at any point, and a channel is left in the center of the tongue well visible at the tip in a V-formation. In both these latter resonances, *e* and *i* occur in varieties very reminiscent of the more classical types of back, unrounded vowels, in the fully-retroflexed phonemes the elevation of the tongue to mid and high position being as far back in the oral cavity as possible, in the half-retroflexed phonemes advanced almost to the mixed position.

We have then thirty possible vowel phonemes: *a, á, ă, e, é, ĕ, i, í, ĭ, o, ó, ŏ, u, ú, ŭ, a·, á·, ă·, e·, é·, ĕ·, i·, í·, ĭ·, o·, ó·, ŏ·, u·, ú·, ŭ·.* Examples can be given for all of these except *ĭ*, and the absence of this is probably accidental. Single term alternances can be given to establish only one of these sets of phonemes (*e·, é·, ĕ·*); the other sets are established by multiple alternances. In a few cases the evidence on the basis of alternances is hardly satisfactory with the material at hand, but the feeling of my excellent informant for these phonemes was so accurate that it can be taken that all the 29 phonemes which occur are distinct entities.[5]

kat·e	*kát·e*	*gät·e*
'I learned	'ass'	'bundle of leaves'
kae	*áé*	*käë*
'unripe fruit; wait!'	'tiger's den'	'weeds'

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[4] Half-retroflexed vowel phonemes will be written with one dash vertical or slanting above the letter, fully-retroflexed with two dashes.

[5] All words of more than one syllable are accented on the first syllable.

kit·a
'man with pus in eyes'

kít·a
'he pulled out'

kombu
'horn'

kómbile
'I did not have (her) as wife'

kŏĕ
'carcass'

{
áú
'lament!'

ăŭ
'3rd day after full moon'

huy
'hit!'

hŭy
'tamarind'

a·ybuṭ·e
'I finished becoming'

há·i
'field near village'

hă·-u·ru
'deserted village'

be·
'mouth'

bé·
'bangle'

bĕ·
'crops'

gi·
'do!'

ki·
'pull out!'

kĭ·e
'down'

{
tó·
'place where bangle is worn above elbow'

tŏ·
'cattle pen'

to·gu
wash it!'

tó·go
plural of *tó·*

{
ú·
'drink by putting mouth to water!'

ŭ·
'plough!'

hu·
'flower'

hŭ·
'worm'

Dravidian scholars will need as much material as possible to establish the historical sources of the half-retroflexed and fully-retroflexed resonances. I shall present here complete lists of the words in my material.

á. *áva* 'that woman', acc. case *áv·a*, dat. case *ávaga* (contrast *avaka* 'those people' [male or female], *ave* 'those things'). *mák·a* 'children'. *bág·u* 'bend!' *bág·ide* 'I bent' (intr.). *kát·e* 'ass'. *gát·u* 'neck'. *át·e* 'I lamented', *áú·le* 'I did not lament', *áú* 'lament!' *áé* 'tiger's den; measure!' *káyta* 'he spent (time)', *káy* 'spend (time)!' (contrast *kayta* '[fruit] was bitter').

ă. *kăy* 'jelly-like substance in spoiled fruit' (contrast *kay* 'hand' and *káy* under *á*). *ăy·a* 'son-in-law' (contrast *ay·a* 'grandfather'). *găt·e* 'bundle of leaves or stalks'. *kăv·e* 'plant Ceropegia pusilla'. *kăĕ* 'weeds'. *hăĕtu* 'old thing'. *ăŭ(-ǰina)* '3rd day after full moon'.

é. *éva* 'which woman', acc. case *év·a* dat. case *évaga* (contrast *evaka*

'which people' [male or female], *eve* 'which things'). *áé* see under *á*. *éúatu* '70'.

ĕ. *kăĕ* and *hăĕtu* see under *ă*. *mŏĕ* 'plant bud', *mŏĕtara* '(plant) is growing buds'. *kŏĕ* 'carcass, wax in ear, scurf due to lack of washing'. *hŏĕ* 'big river', plural *hŏĕgo*.

i. *kít·e* 'I pulled out', *kíp·ile* 'I did not pull out'. *kó·i* 'hen'. *iva* 'this woman', acc. case *iv·a*, dat. case *ivaga* (contrast *ivaka* 'these people' [male or female], *ive* 'these things').

ó. *kóṇḍe* 'hair-knot', 'I had (her) as wife', *kómbile* 'I did not have (her) as wife', *kóṇ·u* 'have (her) as wife!'

ŏ. *mŏĕ*, *kŏĕ*, *hŏĕ* see under *ĕ*.

ú. *óú* see under *á*. *éúatu* see under *é*. *súy* 'whorl of hair'.

ŭ. *ău-(ʃina)* see under *ă*. *tiŋgŭla* 'moon, month'. *gŭy* 'pit, bull', plural *gŭygo*. *hŭy* 'tamarind' (contrast *huy* 'hit!' and *kuy* 'reap!'). *i·ŭ* '7', *hadari·ŭ* '17', *ip·at·i·ŭ* '27', *i·ŭnu·ru* '700'.

á·. *gá·i* 'wind'. *ká·i* n. pr. woman. *há·i* 'fields nearest village'. *á·de* 'I measured', *á·vile* 'I did not measure', *á·vi* 'measure (pl.)!' *á·ḷu* 'rule!', *á·ṇḍa* he ruled', *á·mbile* 'he did not rule'. *ká·mbile* 'I did not see' (contrast *ka·ṇu* 'see!' and *kaṇḍe* 'I saw'). *gá·su* 'potato'. *bá·ʃe* 'language'. *pá·me* 'story'.

ă·. *hă·* in *hă·u·ru* 'deserted village', *hă·mane* 'deserted house'.

é·. *é·* 'get up!' (contrast *ed·e* 'I got up', *eb·ile* 'I did not get up', *ed·u* 'get up!'). *bé·* 'bangle'. *mé·* 'rain' (contrast *me·* 'graze!' and *mĕ·* under *ĕ·*). *ké·te* 'I heard', *ké·pile* 'I did not hear', *ké·* 'hear!', pl. *ké·vi*, *ké·a·ku* 'may hear'. *gé·te* 'I scratched in dust' (and so on as last verb). *hé·gide* 'I told', *hé·gu* 'tell!' *ké·gide* 'I sent', *ké·gu* 'send!' *né·ga* 'tomorrow'.

ĕ·. *ĕ·* 'loose thread'. *mĕ·* excl. used in calling buffaloes. *bĕ·* 'crops', *bĕ·da* '(crops) matured', *bĕ·vile* '(crops) did not mature'.

i·. *ki·* 'pull out!' *bi·ʃu* act of whistling' (contrast *bi·su* 'throw!').

i·. *ki·e* 'down'. *i·gide* 'I descended', *i·gule* 'I did not descend', *i·gu* 'descend!' *i·ŭ* '7' (see under *ŭ*).

ó·. *kó·i* see under *i*. *tó·* 'place where bangle is worn above elbow by women'.

ŏ·. *ŏ·ge* 'inside' (*maneg ŏ·ge ho·da* 'he went inside the house' [*maneg* < *mane-ga*]). *hŏ·* 'one part or piece'. *pŏ·* 'scar'. *gŏ·te* 'ravine'. *tŏ·* 'cattle pen' (an interesting contrast is seen in the nonsense sentence: *tŏ·g ho·gi tó·gova to·gu* 'pen-to [*tŏ·ga*] having-gone place-where-bangle-is-worn-above-elbow-plural-object-case wash!').

ú·. *ú·te* 'I drank by putting mouth to flowing water', *ú·pile* 'I did not drink', *ú·* 'drink!'

ŭ·. ŭ· 'plough!', *ŭ·le* 'I did not plough (contrast *ut·e* 'I ploughed'). *ŭ·-(jina)* 'the day after full moon' (*indu ŭ·* 'today is the day after full moon'). *bŭ·* 'fall!' *bŭ·le* 'I did not fall' (also *bub·ile*; contrast *bud·e* 'I fell'), *bŭ·kide* 'I made it fall'. *dŭ·* 'dust' (contrast *du·e* 'burial ground'). *kŭ·* 'cooked rice'. *hŭ·* 'worm', plural *hŭ·go*. *gŭ·* 'iron plough-share'. *mŭ·gira* 'it sinks under surface', *mŭ·gule* 'it did not sink'.

An appendix may be formed by a list of the numerals. *ondu* 1, *eraḍu* 2, *mu·ru* 3, *na·ku* 4, *aydu* 5, *a·ru* 6, *ĭ·ŭ* 7, *eṭ·u* 8, *ombatu* 9, *hat·u* 10, *han·ondu* 11, *han·eraḍu* 12, *hadimu·ru* 13, *hadana·ku* 14, *hadanaydu* 15, *hadana·ru* 16, *hadari·ŭ* 17, *hadareṭ·u* 18, *hat·ombatu* 19, *ip·atu* 20, *ip·at·ondu* 21, *ip·at·eraḍu* 22, *ip·atamu·ru* 23, *ip·atana·ku* 24, *ip·at·aydu* 25, *ip·at·a·ru* 26, *ip·at·ĭ·ŭ* 27, *ip·at·eṭ·u* 28, *ip·at·ombatu* 29, *mu·atu* 30, *na·lavatu* 40, *ayvatu* 50, *aravatu* 60, *éúatu* 70, *embatu* 80, *tombatu* 90, *nu·ru* 100, *in·u·ru* 200, *mun·u·ru* 300, *na·nu·ru* 400, *aynu·ru* 500, *aranu·ru* 600, *ĭ·ŭnu·ru* 700, *eṭnu·ru* 800, *ombe·anu·ru* 900, *sa·vira* 1000.

MISCELLANEA

THE NAME OF ROLAND'S SWORD

G. Rohlfs, Archiv f. neu. Spr. 169. 57ff. has tried to explain the name *Durendal, Durendart* (Sp. *Durindana*, It. *Durlindana*) by admitting the latter form as the primitive one and explaining *dur end' art* 'hart brennt es daraus' = 'a wicked flame bursts from it'. All one can say of such an explanation is that it is far-fetched: *dur*, said of a flame, is not attested, nor is *ardre* as an impersonal verb 'it burns', *end* = *inde* is a possible, but not the most usual form of *en*; furthermore, this form does not occur in the *Chanson* whose author must have coined the name. In addition, one finds it difficult to understand how a sentence of such a familiar type could be so twisted as to be made incomprehensible in *durendal*. The etymological explanation of a familiar expression cannot be imagined 900 years later by a modern linguist; it must be attested if it is to convince. Rohlfs' solution, even in German, sounds very bookish. The *Dur cop en dona, durum [ictum] in ea dans* of medieval authors proves nothing because, as we know, they project into the words ideas alluring to the medieval mind: in Flamenca *adamas* 'magnet' is explained by *ad* + *amas*!

For me the name is decorative, indicating simply the dangling of the sword, cf. the Italian and Spanish forms *Dur(l)indana* with Como. *dirlindana, tirlindana* 'qualunque cosa lunga, stretta e pendula' (Monti), Verviers *dandurlette* 'ferrailleur', Sancoins *se berdandiller* 'se dandiller' (FEW s. v. *dand-*: 'die Onomatopoie *dand-* malt ursprünglich den Laut der Glocken, vgl. die Ablautformen *dind-*, *dond-*. Sodann wird sie übertragen auf das hin- und herbaumeln der Glocken, und von hier aus auf ähnliche Bewegungen der Menschen': *dandiner* 'balancer son corps', etc.; s. v. *drin-*: norm. *derlind* 'bruit de la vaisselle qui se brise en tombant', *derlinder* 'faire *derlind*, agiter une sonnette', hag. *drelyndáě* 'faire un bruit métallique prolongé'; s. v. *dond-* : *dondaine* 'gros et court trait d'arbalète'—and in dance songs as a refrain (*fari*) *dondaine -on*). The *-ri-* infix is very frequent in such onomatopeic formations: *lanlaire, derirette*, etc.; cf. Thurau, Der Refrain in der franz. Chanson 87 and 480 (cf. Fr. *tirelire* 'saving-box', *tirelitantaine* in Rabelais 'jeu de la queue-leu-leu', and Cat. *l'any tirurany* 'l'any X'). In Bibliotheca dell' Arch.

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rom. 2.3.152 ff. and in ZRPh 56.74 I have listed many of these formations with the suffix Fr. *-on -aine*, Sp. *-on -ayna* which I called 'Trällersuffix' (trolling suffix), particularly the Sp. *guilindo-guilindayna*, Fr. *gueridon guelidon* refrain. It is very interesting to see as variants of a Catal. *Galindoy* which means a non-existent, fictitious person (in a riddle) the forms *Tarundán* or *Durrandal!* Cf. also Prov. *trant(r)aia, d(r)and(r)aia* 'vaciller, chanceler', *trantoŭla, trandoŭla* 'balancer, vaciller, brandiller'. One can easily add to these jocular and picturesque creations of an acoustic imagination. The stem *dur(l)ind* in our word probably meant 'a thing which dangles and makes noise' (cf. *dandurlette* 'ferrailleur' with exactly the same connotations), the *-art-* suffix is the same as in fantastic names of heroes of the chanson de geste (*Escouflard*, for example); it may also have been influenced by *dard* 'dart' just as *dur* may have influenced the first syllable. The ending *-al* gives a Southern[1] touch as in those endings listed by Sainéan in Les sources de l'étymologie indigène 2.427 (cf. also the transformation of *emir* in Fr. *amiral*, OF *-acle -afle*, id., Bibl. dell' Arch. Rom. 2.20.350); *-ana* is the playful suffix mentioned above (or perhaps as Rohlfs suggests, the Fr. feminine accusative). It seems to me significant that an Arabic emir could be called in a version of the Quatre fil Aimon *Durendal l'amiré* (as in the Sp. romances *Durandarte* becomes a hero, cf. Rohlfs 62, no. 13; 60, n. 5). This Arab *Durendal* retains the flavor of fiction as does the King of *Torelore* in Aucassin et Nicolete or the above-mentioned Cat. *l'any tirurany*: they are names of Nobody and Nowhere! The sensationalism of the *Chanson de Roland* is of a rather naïve sort: in *esterminals* (cf. Speculum 13.461), a rather rare Latin word was used to produce the effect of exoticism; by *Durendal*, an onomatopeic word somewhat travestied, shivers of admiration and horror were probably produced.

In Rohlfs' enumeration of the four sources of sword-names (1. an adjective: *Joiose*; 2. two adjectives: *Hauteclere*; 3. substantive: *Constance*; 4. imperatives: *Trenche-fer*) we miss one main source: the unexplained ones (for example *Murglais*, etc. *Almace* (*-ice*), two of the five swords in the Chanson de Roland). Why should we not admit among the sources a popular onomatopeic stem for the name of Roland's sword as we do for the Cid's horse (*Babieca* = **baba* 'foam' + *-aecus* + pejorative feminine, Bibl. dell' Arch. Rom. 2.1, passim)? There is probably the same relationship between *Durendal*, the name of the

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[1] Or perhaps a more learned sound. In J. Romains' Les hommes de bonne volonté an actress called Vignald changes the vulgar form to Vignal which becomes her stage-name.

sword, and *Durendal*, the name of the hero, as between *Murglaie*, the sword of the Sarazin Cornumarant, *Murglais*, the sword of the traitor Ganelon, and the numerous Moorish heroes, *Murgalant, Murgale(t)*, belonging to Fr. *morgue* 'disdain', Prov. *morgo* 'rancor'.

It seems clear that the names of heroes and of swords must be of the same type, since giving names to objects implies animating and personifying them (cf. the German name for a helmet *Hildegrim*). *Floberge*, the name of the sword, is the feminine (corresponding to *espee*) of a man Flaubert; in the same way *Gramimund* (*Gradamont*), the horse of a Moor in the Chanson de Roland, does not seem very far from *Bramimunde* (*Braïmonde*), the name of a Moorish queen. Where Pio Rajna saw indications of Teutonism (and other scholars Arabisms) Sainéan taught us to recognize pure fictions of romance in Romance words.

Leo Spitzer

SPANISH *bosar* 'TO VOMIT', *rebosar* ID., 'TO OVERFLOW'

The word is not included in the REW, which only mentions (no. 9434: **vŏltiāre* 'wälzen') Valencia *bosar*, Port. *bolsar* 'to vomit', and which rejects the etymology *vomitiare* of Caroline Michaëlis de Vasconcellos, Rev. lus. 1.299 because of the *-l-*; under no. 9453: **vomitiare* only the OPort. *boomsar* is mentioned after Michaëlis, with a question mark as to the validity of the reconstructed Latin form. Since I do not have at hand the article of Michaëlis I can not determine the age of the *-oo-* forms in Port.: the OPort. example given for *boomsar* by Cortesão occurs in a sentence in which there are two instances of *ataa* for *ata, adza* = Sp. *hasta*, so that the double *-oo-* may be as meaningless as the double *-aa-*, as meaningless as the form *boosco* for *bosque* in the same dictionary. The *-m-* in OPort. *bomsar* may quite well be secondary (assimilation to initial labial or influence of *vomitar*), and *-s-* in OPort. for *-ç-* is equally striking. Sp. *bosar* (from which the Valencia form originates) can by no means be either a **voltiare* (which corresponds rather to fr. *vousser* 'to vault'), or a **vomitiare* because of *-ti-* > *-ç-, -z-*. The analogy of *arquear* 'to vomit' from *arcus* (REW) must not induce us to accept **voltiare*. I should therefore like to suggest a *vulsare*, from *vulsus* 'spasmodic, spastic' attested in Latin (Vegetius) and also in REW 9465,2 (It. *bolso*, Prov. *bols*, etc. 'chest-foundered [horse]'); cf. *convulsio* 'cramp'. This etymology brings new material to the discussion between Meyer-Lübke, Zauner, and Brüch (cf. the last article of Zauner, *RFE* 17. 286) on the evolution of *-ls-* in Sp.: *vulsus* > *bosar* would be a

parallel to Sp. *soso*, Port. *ensosso* = *insulsus* and Sp. *duz* for *dulce*. Andal. *rebueso* 'rebosadura' is parallel to *consuelo* from *consolar*.

LEO SPITZER

THE DAYS OF THE WEEK IN THE LANGUAGE OF TAOS PUEBLO, NEW MEXICO

The pueblo of Taos is situated in northern New Mexico, just outside the village of Taos, seventy-five miles north of Santa Fe and 100 miles south of Alamosa, Colorado. It is the northernmost of the Rio Grande pueblos. The Taos language forms with that of Picurís (twenty-three miles south) the northern branch of Tiwa. Tiwa is one of the main divisions of the Tanoan stock, Tewa and Towa being the others. (Cf. J. P. Harrington, American Anthropologist n.s. 12. 11–48 [1910].)

The published material on this language includes the paper by Harrington just mentioned, and one other by him (Holmes Anniversary Volume 142–156, Washington, 1916). The present paper is based upon recordings made by me during the period from November, 1935 to August, 1936, in weekend and other visits to Taos from Alamosa. General studies of the phonetics and morphology of the language are now in preparation; a brief phonetic analysis of a text has already appeared in Maître phonétique 56.59–62 (1936).[1]

The population of Taos pueblo (about 800) may be divided linguistically as follows: the old people (those over fifty) speak Taos and Spanish, but, except for a few educated persons, little or no English; those in the group between twenty and fifty speak Taos, Spanish, and English, the quality of the English improving at the expense of the Spanish as the age decreases; those below twenty speak Taos and English. In the oldest group there are a few individuals, very old women, who know very little Spanish, and are thus unilingual. Among very young children below school age there are some who have not yet learned English, though there are also some whose Taos is deficient. But aside from these, the whole population is bilingual or trilingual. My first informant, A, is trilingual, as is his wife; both of them speak better English than Spanish; they are between twenty-five and thirty. My other informant, B, who is about thirty, knows no Spanish, but speaks a rather correct English. The Taos of these three individuals

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[1] Additional material secured in 1937 after the writing of this article has confirmed but not changed it.

may be considered identical. They agreed in describing the language situation as it is here outlined.

Among such a population the process of acculturation brings with it an immense amount of linguistic borrowing. I hope to make detailed studies of all the Spanish and English loanwords I find in the language. The present paper concerns itself with one such group of loans, the words for the days of the week. The week is a European importation, and was adopted by the Taos upon their accepting Christianity from the Spaniards. The names for the days of the week are therefore Spanish loanwords. Their forms indicate adoption at a period when the population was only beginning to learn Spanish, as they show considerable phonetic distortion. At the present time the words are obsolescent, their replacement by English being described below.

The Spanish names are: domingo, lunes, martes, miércoles, jueves, viernes, sábado. The Taos forms as given me by A are:[2] *tum'ĩku* [tǫm'ĩkʊ], *l'unãsi* [l'ǫ ͧnãsi], *m'oltəsi* [m'altəsi], *m'ialkulisi* [m'ialkʊlɪsi], *xʷ'abasi* [xʷ'a·basi], *m'ialnãsi* [m'ialnãsi], *s'obolu* [s'a·balʊ]. The word *tum'ĩku* means 'week' as well as 'Sunday', as in the sentence *oj'iamẽʔãnã kʷ'ẽʔogã p|ojuotum'ĩku* 'I was in Taos three weeks ago'. The words are treated as nouns, in that they take prefixed numerals in composition, as in the cited *p|ojuotum'ĩku* 'three weeks' (*p'ojuo* 'three'), and suffixed adverbial particles, as *s'obolukinã* 'on Saturday' (-*kinã* 'on' temporal). But they differ from other nouns in being in what may be called the pure stem form, since they do not have one of the characteristic noun suffixes -*na*, -*nã*, -*nemã*, -*ne*, and accordingly have no plural forms.

Let us now take up each form separately. *Tum'ĩku* < *domingo* shows replacement of the Spanish voiced stops by voiceless ones, elimination of the cluster $n + g$ by replacing the preceding vowel by a nasalized vowel, and replacement of *o* by *u*. The Taos *o* phoneme is a very open unrounded vowel, so that Spanish *o* can only be replaced by *u*. The Spanish *i* in this word is locally very much nasalized and is close, so that its nearest Taos equivalent is the *ĩ* phoneme; this vowel in Taos is not followed by syllable-final *n*, and moreover such an *n* would not be assimilated to a following midpalatal, but would remain denti-alveolar; the replacement of the Spanish [iŋ] by *ĩ* is therefore not surprising.

[2] The Taos words are presented in a phonemic orthography: main stress by a raised straight tick before the stressed vowel, and secondary stress by a lowered straight tick; low tone with main stress by a grave accent before the vowel; high tone by an acute accent; nasal vowels by a tilde; *j* is the palatal semivowel; ʔ is a very weak glottal stop. For the details of pronunciation IPA symbols are used; a dot under a vowel denotes extra-close pronunciation.

The real problem is in the *t* and *k*. In Taos these are voiceless fortes, the *t* slightly aspirated in initial position, though distinct from the true aspirate fortis *t'* (with strong aspiration), and the *k* somewhat aspirated in all positions, there being no midpalatal aspirate stop phoneme (*k'*). If Taos had no voiced stops, they would be the nearest sounds to Spanish *d* and *g*. But Taos possesses *b*, *d*, *g*, which are voiced lenis sounds of the usual type. True, except for an occasional recent loanword, they do not seem to occur initially, which would eliminate the *d*, and the occurrences recorded all seem to be in regularly recurring morphological elements such as *-d'ene*, *-d'enemã*, *-bo*, *-dã*, *-gã*. I suggest that the apparent limitation of these sounds to position before a few vowels and the morphophonemic limitation to certain types of particles may have been so strong as to prevent their being used in any other way even in a loanword. This would be evidence for borrowing before the Taos had become truly bilingual. The only other explanation would be borrowing not directly from Spanish but through the medium of some language that had no voiced stops.

The word for 'Monday' is *l'unãsi* < *lunes*. Here we have a final vowel added, and a change from *e* to *ã* after the *n*. Taos has no *s* in syllable-final position, and its *s* phoneme seems to vary freely with some speakers in the direction of [ʃ]; this would account for the palatal vowel added to it. The change of *-ne-* to *-nã-* may be due to the fact that in New Mexican Spanish a vowel following a nasal consonant is nasalized, so that the Taos heard a nasalized vowel; they have both *ẽ* and *ã*, but in most Spanish loanwords *e* is regularly replaced by *a*, so that here [ɛ̃] was replaced by *ã*. Moreover, *-nã* is a common morphological particle, while *-nẽ* is a rare syllable.

For 'Tuesday' we have *m'oltəsi* < *martes*. The *a* is replaced by the Taos *o* phoneme, which in a checked syllable is a short unrounded back vowel [ɑ], like American English *o* in *hot*; this was evidently felt to be closer to Spanish *a* than the Taos *a*, which is uniformly a fronted and raised vowel between [a] and [æ]; *r* is replaced by *l*, there being no *r* in Taos except in some recent loans in the speech of Taos-Spanish-English trilinguals. The final *i* has already been explained. There remains the vowel *ə* for Spanish *e*. In New Mexican Spanish unstressed vowels are somewhat centered, whereas in Taos all vowels are clearly pronounced when unstressed except the *ə* phoneme, which in this position is much like English [ə]; there being no nasalization, the Spanish vowel was heard as [ə] and was replaced by the nearest Taos vowel, rather than by a member of the *e* or *a* phonemes.

In *m'ialkulisi* < *miércoles* 'Wednesday' we have again the addition of final *i*, but the stress remains on the first syllable, since Taos admits initial-stressed words of four syllables. The Spanish vowel group *ie* is replaced by *ia*, with the representation of *e* by *a* already noted (*ie* exists, but is rare in Taos); *r* is replaced by *l*; *o* is replaced by *u*, which before *l* in Taos sounds like a very close, over-rounded *o*. The presence of still a third vowel, *i*, before *s* in this case, can perhaps best be explained by the fact that in the Spanish *miércoles* the final syllable has secondary stress and is usually rather close in quality; since Taos *e* is open even when unstressed, the Spanish sound may have been heard as nearer to Taos *i*, which is rather open when unstressed, than to any other vowel.

'Thursday' is *xʷ'abasi* < *jueves*. The Spanish initial cluster is accoustically identical with the Taos labialized midpalatal fricative *xʷ*. Spanish *e* is replaced by *a* in both syllables. In the first, stressed syllable this is in accord with the most usual Taos practise in loanwords; in the second syllable it may be due to the same practise or to assimilation, although *e* seems to be more common after *b* in native Taos words than does *a*. The *b* is the best equivalent for the Spanish bilabial fricative, and *b* is not uncommon in Taos in medial position.

In *m'ialnãsi* < *viernes* 'Friday' we have the expected final *i*, -*nã*- for -*ne*- (as in *l'unãsi*), *l* for *r*, and -*ia*- for -*ie*-. The initial sound is however *m*. The Spanish word has a stop when at the beginning of a breath group, otherwise a bilabial fricative; we might expect *b* (as in *xʷ'abasi*), but *b* seems not to occur initially in Taos. Though *m* may seem farfetched phonetically, and can perhaps be explained by analogy with the word for 'Wednesday', *m'ialkulisi*, there are nevertheless other loanwords with *m* for initial [b], as *mₗulsoʔ'ona* 'pocket' < *bolsa*.

For 'Saturday' we have *s'obolu* < *sábado*. The *o* phoneme (appearing stressed as a pulsated unrounded back vowel, and unstressed as the same vowel short) seems to be the regular way of replacing Spanish *a*. The final somewhat open *u* for close *o* is also regular. The intervocalic *b* is expected, especially since -*bo* is a common Taos morphological particle. The presence of *l* for *d* is perhaps due to the fact that Spanish has here a fricative ([ð]), which is acoustically more like Taos *l* than Taos *d*.

It can be said at this point that other Spanish loanwords show many of the phonetic distortions noted here.

As has been stated, these words were given me by the informant A, who fitted them to the phonetic and morphological system of his language. But B, who was sent away to school so early that he has forgotten or never knew Spanish, does not know these words, and he

uses the English terms, which are perfectly understood by all except the very oldest people. Moreover, he does not adapt them to Taos phonetics, and treats them as indeclinable words (which the Spanish terms are also, since they have no noun suffixes). B would express 'I'll see you on Sunday' by *ām'ū̃já Sunday-kiñā*, using English sounds (or his approximation of them) in the word *Sunday*. A would understand this and might use it himself, but more usually would say *ām'ū̃já tum'ĩkukiñā*.

The Taos terms for the days of the week are thus interesting not only for the phonetic changes involved as compared with the Spanish originals, but also for the light their use throws on the different status of present-day English loanwords from that of the older Spanish ones.

GEORGE L. TRAGER

BOOK REVIEWS

Indogermanisches Jahrbuch. Volume 22: Bibliography of the year 1936. Pp. 417. Edited for the Indogermanische Gesellschaft by ALBERT DEBRUNNER and WALTER PORZIG. Berlin: Walter de Gruyter and Co., 1938.

Again the Indogermanische Gesellschaft has presented linguists with an indispensable tool. The work is too well known to permit more than the recording of the names of the scholars who have unstintingly sacrificed their time that others may profit.

The field of General Linguistics is divided among W. Brandenstein, P. Meriggi, E. Karg-Gasterstädt, H. Spehr, Eb. Zwirner. The Indo-European language is cared for by W. Brandenstein; Indo-European antiquities by H. Krahe. W. Printz has charge of Tocharian and of Aryan; V. Inglisian of Armenian; N. Jokl of Albanian. Greek is in the hands of G. Humbert; the languages of Italy in those of G. Devoto. J. Pokorny reports on Keltic; G. Streitberg on Germanic; E. Fraenkel and O. Hujer on Balto-Slavic; J. Friedrich on Hittite and the other languages of Asia Minor.

The volume is published with the support of the Notgemeinschaft der Deutschen Wissenschaft, and the fact may serve as a reminder that the enterprise still needs assistance. Our members are urged to do their utmost to insure the continuance of a work from which they profit so greatly.

G. M. BOLLING

The Noun Declension System in Merovingian Latin. Pp. xx + 525. By LOUIS FURMAN SAS. Paris: Impressions Pierre Andre, 1937.

Believing that 'the most important reason for the existing disagreement concerning the evolution of the declension system is the lack of a statistical work showing the status of the system in the Merovingian period', Sas has compiled statistics for all the endings of the noun (and generally for the adjective) in a series of ten texts or collections of texts ranging in date from the Peregrinatio (between 380 and 540) to 800 A.D. Of these texts three (the Peregrinatio, Gregory of Tours' Historia Francorum, and the Liber Historiae Francorum) are literary and

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historical, the others (Lex Salica, the formularies, and the royal diplomas and private charts from 625 to 800) are non-literary documents.

The results of these labors Sas presents, after elaborate discussion, in a series of tables in which, among the welter of variant case endings, a number of vulgar tendencies are noticeable: an oblique form in the singular, a well-established -*as* nominative plural of the first declension (in the non-literary texts alone), a generalized nominative-accusative form in the neuter both plural and singular.[1] *De* with the ablative as an apparent genitive substitute is more frequent in the first than in the second and third declensions, but even in the first does not become dominant. The highest incidence is in the Formulae Andecavenses, where there are 7 examples as against 13 of -*ae*. *Ad* with the accusative-ablative for the dative singular predominates in Declension I in six texts, and in Declension II for neuter singular in seven. The first three declensions, however, are still maintained in force, and the neuter is generally distinct from the masculine. The relative number of occurrences of all these variant forms does not increase in any regular order throughout the texts, but the Formulae Andecavenses and the documents published by Lauer and Tardif dated between 692 and 717 show the ruin of the declension system most clearly.

From these facts the author draws (467) the following conclusions: 'The data we have tabulated indicate quite clearly that the written language of this period had a systematized declension norm which differed from the Classic Latin system, but which, nevertheless, was an organized system subject to rules and procedures which are quite regular for any given text.' This comes about (29) because, although they knew the Classical Latin forms 'we do not believe that scribes were insistent upon following the morphology of a past epoch to express their ideas before their Merovingian audience and do not hesitate' for example 'to write *de* plus -*a* (for the genitive) as they see fit.' In the matter of spelling 'the scribes of the later texts (after the 6th century) followed the best pronunciation of the day'. (64)

It follows, then, from the number of occurrences of vulgar forms, that 'there is sufficient evidence from which to conclude that the later texts (that is, those of the 7th and 8th century) show a more advanced state of change than the earlier ones'. (483) From this state the development of the Old French declension system may be observed 'and do(es) not have to be deduced from a problematic "Vulgar Latin".'

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[1] Except for -*um* oblique, which is weak.

(ibid.)   Case endings, it is to be noticed, which are soon to disappear are avoided in these texts, while those destined to survive preponderate.[2] (484)

These clues 'point to an oral language, similar in its general features to the written, which was to develop into a primitive form of the Old French system in the latter part of the eighth or the early part of the ninth century' (484–5), but since some of the forms attested in the texts could not develop into OF, 'the written language was not "identical" with the oral language of the period.' (488) Consequently 'it is possible to derive the Old French two-case system from a theoretical "Merovingian ancestor" usage in our later texts. Such a derivation may be made by collectively considering the general pattern of each declension or by individually studying the development of the separate cases.'   (485)

Every point of this argument is open to objection. If there is a 'systematized declension norm' in these texts, it is difficult to grasp. What 'rules and procedures' impel a man to write (as the formulary of Marculfus does, for example) dative in *-ae* (38 times), *ad* with *-a* (38), *ad* with *-am* (3), *-a* (4), and *-am* (1)? But in any case whether the later texts show a more advanced state of change than the earlier depends on several considerations, none of which Sas seems to have weighed sufficiently.   In the first place a chronological study must take into account not only the date of a work but the level of style to which it belongs, and Gregory of Tours, the Liber Francorum, even Aetheria are quite another thing from formularies and documents, and consequently Gregory of Tours can hardly stand alone as witness for the Latin of the 6th century against documents for the 7th and 8th.   In the second place, a chronological work might well consider chronology, and not treat the Formulae Andecavenses, composed in the 6th century, out of hand as 8th century evidence. Granted, of course, that an 8th century copy of a 6th century work cannot be taken, even with critical appraisal, as absolute evidence for 6th century forms, how can it be used to show that its own forms do *not* occur in approximately the same frequency *before* the 8th century? Since the Andecavenses are as chaotic in declension as any of the 8th century texts, we might have expected a more critical treatment of this question, particularly in view of the fact that the Peregrinatio is not set in the 11th century, when our copy of it was written. But perhaps for the question at issue the

[2] But there are more examples of gen. *-arum* in the later texts than nom. *-ae* and *-as*.

Andecavenses do not really matter, for if the texts even in the 8th century never show all the features of the common speech and this 'Merovingian ancestor', if we are to call it that, must be reconstructed by combining various practices from various texts, what is new in either the method or the results? Vulgar Latin, put out of the door once, has got back in by the window, and by accepting it Sas is left with no evidence to support his late date, since there is no warrant for supposing those changes had not already taken place in popular speech.

This brings us to the root of the whole matter, that Sas has, in constructing his argument, misunderstood the phenomena he is attempting to study. Writing is not a popular art. It is learned by a set method, and with it are learned, either well or badly, reading and spelling. By the fact of writing the scribe adopts the literary tradition as well as he understands it or remembers it. His errors, then, or deviations from the standard will be instructive when they show a divergence of his own speech habits, but the number and frequency of his errors depend quite as much on his education and attention as on the state of his own speech. There is, that is, no proof that a man who writes all his accusatives in -*am* quite properly ever pronounces -*am*, much less that one who writes it eighty times in a hundred speaks it oftener than a man who writes it five times in a hundred. Sas's argument that -*am* was nasalized, and that 'the vagueness of this nasal may have been responsible for the hesitancy in orthography' (64) as well as his heated remark at (480): 'We failed to find any references from authors of our period which would support the view that the Classic Latin system such as used by Caesar or Cicero was considered by them to be the model from which no departures were to be made',[3] all imply the rise of a new tradition in which the writer attempted phonetic spelling, or the state he refers to (9) when 'the writers would no longer be interested in writing according to the rules of a past era but rather according to the uncodified, changing system of their own period.' Or to put it more succinctly, the Merovingians were writing common speech. Does Sas recall having written (7): 'The plebeian, proletarian or 'vulgar' language is really a purely oral idiom ...?'

These statistics, then, cannot bear the construction Sas puts upon them, but whether they may be relied upon for further study is still a matter of question. They might, to be sure, have been made a little

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[3] Contradicted, except for the 'Caesar and Cicero' which I take to be rhetorical color, by the statement of Gregory which Sas himself quotes and by all other available evidence.

tidier by more careful attention to obvious graphic errors. I cannot, however, see the advantage of counting adjectives in agreement with nouns in a study of this sort. *In ipsas villas* would not normally be regarded as two ablatives in *-as*, and it strikes me as odd to read (93): 'We also noted 2 "accusative absolutes": 169, 39 *susceptas a Iudaeis species magnas.*' Where the number of instances is small, as it frequently is, these numbers are misleading, and it is impossible to control them since only the deviations from the Lat. usage are cited.

It is principally, however, on the question of classical usage that the Latinist must differ most sharply with the method. In order to tabulate his results within the narrow limits of the declension system, Sas has regarded equivalent expressions as functions of the normal Lat. case. So *ad* with the accusative for the dative is listed as a dative variant, while *de* with the ablative will be found counted (not, of course, in all senses) among the genitives. This practice constructs as a norm a system of such simple perfection as even Latin Composition would not attempt. We should find Vergil, for instance with nom. 3rd decl. *-em* set down to his account in Aen. 1.573 *urbem quam statuo vestra est*, and perhaps (*iustitiaene prius mirer belline laborum* Aen. 11.126) acc. in *-ae* and *-um*. The result is the inclusion as deviations in Sas's statistics of many forms which he knows to be standard Latin and many false classifications. A good illustration of the dangers in this method of reversed history is afforded by a passage (Peregrinatio 37.2) in which Sas has been misled by one of the ablest of living Latinists. Et quoniam nescio quando dicitur quidam fixisse morsum et furasse de sancto ligno is listed by Sas 106 as partitive genitive (so Löfstedt, Syntactica 1,118–9) which it is not, but rather an expression of subtraction; it bears no relation to the genitive.

KENNETH M. ABBOTT

A Grammar of the Phoenician Language. Pp. 172. By ZELLIG S. HARRIS. American Oriental Series, volume 8. New Haven: American Oriental Society, 1936.

This book not only 'fills a long-felt want,' nothing inclusive on Phoenician having appeared since Paul Schröder's long antiquated work on 'Die phönizische Sprache,' published in 1869, but is already a classic in the field of Semitic linguistics. The acclaim with which it has been met by a number of authoritative Semitists testifies to its great merits. There is little doubt that a second edition will be called for very soon and these remarks can therefore serve only to call the attention

of linguists in general to a book which they should know about, whether they are professionally at home in the Semitic field or not.

Harris has not only used all the relevant literature on Phoenician (168–72), but has gone carefully through all the scattered sources (inscriptions listed 157–61; source bibliography 163–68), bringing his accurate knowledge of the Canaanite dialects and his superior linguistic competence to bear on the peculiarly refractory, fragmentary, essentially unsatisfactory materials which constitute our source for the phonology and morphology of Phoenician, one of the most important Semitic languages from the historical and cultural point of view, mediating as it did between the high cultures of western Asia and the cultures of the Mediterranean. In dealing with Phoenician, we have not the advantage of being able to base our observations on copious, connected texts, such as we have for Hebrew, Akkadian, or Hittite, but must content ourselves with a mass of scattered inscriptions from Phoenicia, northern Africa, and a few other points in the Mediterranean area. These inscriptions are generally jejune as to intrinsic interest and necessarily full of obscurities and ambiguities. For vocalism they must be pieced out with what we can glean from the Phoenician passages in the Poenulus of Plautus, from Greek and Latin loanwords, and from citations, chiefly of personal and place names, in Greek, Latin, Egyptian, Akkadian, and Hebrew sources. A skilful handling of these various kinds of evidence can, however, be synthetized into a reasonably clear outline of the essential features of Phoenician. On the whole, Harris has got out of the material what it can give without forcing. On a number of points he has perhaps been too summary or impatient, but a second edition will undoubtedly bring substantial revisions and a more considered weighting of the less obvious sorts of evidence.

For two features of the book we must be particularly grateful. The first is the author's clear sense of dialectology, both of time and place. In the homeland he distinguishes an Early (to 800 B.C.), a Middle (800–500 B.C.), and a Late Phoenician (500 B.C. to the beginning of our era); in northern Africa, a Punic period, which runs parallel to Late Phoenician, and a Neo-Punic period which takes in the long span from 146 B.C., when Carthage was destroyed by the Romans, to the arrival of the Arab conquerors in the 6th century A.D. Local dialects in the east are somewhat less easy to determine. Besides the normal dialect of the majority of the Phoenician inscriptions, aside from Punic and Neo-Punic, we have special dialectic features in Byblos, whose oldest inscription dates as far fack as the 13th century B.C., in Zenjirli,

where Aramaic influences are discernible at an early date, and in the island of Cyprus. With such a vast time span (roughly 1800 years, from 1250 B.C. to 550 A.D.) and so scattered a territory (Marseilles to Syria), it is clear that 'Phoenician' really means a group of Canaanite dialects, each of them differing considerably from period to period, even if the divergences and changes can be established only in a very fragmentary way.

The second feature that I have referred to is the excellent glossary (71–156), including proper nouns, which covers all the material in both native and foreign sources. This is easily the most valuable portion of the book and makes it more readily possible than before to find the Phoenician cognates for known Semitic roots or words. The close resemblance of Phoenician to its sister language, Hebrew, is obvious throughout the work and it would have increased the usefulness of the glossary very materially if Hebrew cognates had been entered systematically instead of only sporadically. In many cases such comparative material gives the Phoenician entry its proper place or weight. Thus, *mḥq* 'name of a calling' (117) should be compared with Hebr. *mḥq* 'to pierce'; **nbl* 'harp' (123), inferred from Gk. νάβλα f. and νάβλᾱς, -ᾱ m. 'Phoenician lyre', should have been fortified by Hebr. *nḗbel*, *nḗḇel* 'harp'; *nzq* 'suffer injury' is entered with comparison of Biblical Aramaic and of Akkadian *nazāqu*, which almost implies, though it is certain that Harris did not mean to so imply, that the root is not otherwise found in Canaanite (cf. Hebr. *nḗzeq* 'damage'); *l-m-n'r-y* 'from his youth on' (sub *n'r*, page 124) probably receives important light as to vocalization from such Hebr. forms as *mi-nn•'ūráy* 'from my youth on'; it would have been interesting to add to the Hebr. entry *pr'š* 'flea' (*par'óš*), sub Phoen. *pr'š* n. pr., that there is also a Biblical Hebrew personal name *Par'óš*. On page 154 the Phoenician name *Širyón* 'mount Hermon' (Deut. III 9) should have been entered (**šryn*; inasmuch as Phoenician no more than consonantal Hebrew recognizes a distinction between *š* and *ś*, this Hebrew citation raises the question of whether Phoenician '*š*' was not actually pronounced *s* at the time of the composition of the Deuteronomic passage in question, Hebr. *ś* being by that time presumably identical phonetically with *s*—an important point for Semitic phonology, Semitic '*š*' being perhaps more properly defined as *s*—, or, less likely in view of the merging of Sem. '*š*' and *ś* in Ugaritic '*š*', whether Phoenician did not possess the two sibilants '*š*' and *ś*, inadequately rendered, as in consonantal vs. pointed Hebrew, by the one consonantal sign '*š*').

If there is any fault to find with the admirable Phonology (11–37) and Morphology and Syntax (39–66), it is that they are far too short. I hope that Harris devotes at least twice as much space to these sections in his forthcoming revision. A number of points of phonology come out far more crisply and interestingly if the Greek and Latin transliterations are completely utilized. I shall mention only two such points.

On page 22 is a paragraph that I find extremely puzzling. 'For the pronunciation of the dental stop,' says Harris, 'there seems to be evidence that *t* [I use transliterated instead of square Hebrew characters. Would that Harris and all other Semitists did likewise in their grammatical discussions!] in Punic times was aspirated while *t* was unaspirated. In the Phoenician transcriptions of Latin names *t* is almost always transcribed *t*; *st* (in which the *t* would be unaspirated) is regularly transcribed *st*. Thus Quintus *qynt'*, Rogatus *r'g't'* [in Neo-Punic the laryngeals, ', ', *ḥ* and *h*, had come to be chiefly used for vowels], Titus *tt'*, etc. (but Nyptanis *npthn*), while Restitutus *r'stytt'*, Staberio *'st'bry*, Faustus *p'wst'*. This difference in aspiration between emphatic and non-emphatic was probably true of the other stops also.' If I understand Harris rightly, he means to state or imply: (1) that the Phoenician *t*, and correlatively *p* and *k*, were unaspirated but that the corresponding 'emphatics', *t* and *k* (generally written *q*), were aspirated; (2), that Latin *t*, and correlatively *p* and *c* (i.e. *k*), were aspirated; (3) that in the consonantal cluster *st*, however, and correlatively *sp* and *sc* (i.e. *sk*), the stop (*t*, *p*, *k*) was unaspirated. But the facts are almost certainly wrongly conceived in 1 and 2. There is a great mass of evidence to show that the Semitic non-emphatic voiceless consonants (*p*, *t*, *k*) were at all times and in all dialects aspirated[1] (thus, Arabic *t* and *k* are clearly aspirated to this day,[2] while emphatic *t* and *k* are entirely unaspirated, 'emphasis' having no more to do with aspiration in Semitic than in those Caucasic languages that, as Trubetzkoy showed, distinguish an unaspirated emphatic series from an aspirated non-emphatic one; Greek

[1] The fact that the graphic signs for Semitic *p*, *t*, *k* were borrowed, directly or mediately, by Greek for its non-aspirate *π*, *τ*, *κ* and that the Semitic *t* was used for the Greek aspirate *θ* (the emphatic *q*, however, when used at all, as koppa, was ordinarily merely a variant of *κ* before back rounded vowels, not a character for *χ*) is an entirely different problem, though it is to be feared that some Semitists have been led astray by it to formulate erroneous conceptions of the nature of the Semitic voiceless stops.

[2] Sem. *p* appears in Arabic as *f*, probably via the aspirated *p*, *p'*, that was the normal pronunciation of *p* in Hebrew and Aramaic.

ϕ, θ, χ are consistently transliterated into Jewish Aramaic and Syriac as ordinary p, t, k, while Greek τ and κ are transliterated as $ṭ$ and q respectively, Syriac going so far as to invent an emphatic p, $ṗ$, to take care of the ordinary unaspirated Greek π, with which it was totally unfamiliar). Moreover, Latin t, as well as p and c (k), were unaspirated consonants (why, otherwise, would the Romans have transliterated the Greek ϕ, θ, χ as ph, th, ch?), as they are to this day in Spanish, French, Italian. The difference in treatment in Phoenician between Latin t and st means nothing at all for Latin but simply implies that the Phoenician phoneme t, exactly like the English phoneme t today, varied between aspirated non-emphatic t, e.g. in syllables like ta-, and secondarily unaspirated non-emphatic t, e.g. in syllables like -sta- (cf. Eng. top, with aspirated t, and $stop$, with unaspirated t), the s deaspirating the following stop. Hence the Phoenician ear, when confronted by a Latin st, interpreted the t as equivalent to their own t, neither the Latin nor Phoenician t being aspirated in this position and the Latin t not having the other phonetic characteristics of their native $ṭ$ (if we may judge by modern Arabic, these included greater pressure, dorsal as contrasted with dental articulation, and, above all, a postvelar resonance). But when the Latin t appeared alone before a vowel, as in $Titus$, its curiously clear, 'metallic', because completely unaspirated, t struck the Phoenician ear as more like the native unaspirated $ṭ$ than the native aspirated t in spite of the fact that Phoenician $ṭ$ and Latin t, a dental stop, were in other respects thoroughly dissimilar sounds. If, now, we turn to the Phoenician glossary, we find, as a matter of fact, that in a significantly large number of cases the Phoenician p, t, k were transliterated into Greek and Latin ϕ, θ, χ and ph, th, ch respectively (e.g. Sanchuniathon, a phonetically sensitive Phoenician thoroughly at home in Greek phonetics, transliterates $kšrt$, the name of a native goddess, as $\mathrm{Xov\sigma a\rho\theta\iota s}$, implying a native $k'ūsart'$; see page 113, sub $kšr$), while the emphatics, $ṭ$ and q, appear as τ, κ and t, c (e.g. Sanchuniathon's god name $\mathrm{M\epsilon\lambda\kappa\alpha\rho\theta os}$ < Phoen. $mlqrt$; see page 119). That q and $ṭ$ were completely unaspirated is further shown by the fact that they may soften to g and d in transliterations (e.g. $\gamma\alpha\delta ov$ < $qṭn$, page 143; $\sigma i\gamma\lambda os$ as well as $\sigma i\kappa\lambda os$ < $šql$ 'a weight', page 153).

The second point that I should like to call attention to is the problem of the spirantization of ungeminated non-emphatic stopped consonants after vowels. As is well known, this process, affecting p, t, k, b, d, g, is characteristic of both Hebrew and Aramaic. One expects it on a priori grounds for Phoenician as well, but the bare consonantal framework of

the native orthography, phonemic rather than phonetic in spirit,
leaves us in the dark. 'There is no clear evidence,' says Harris (28),
'either internal or from the transcriptions, for such spirantization.'
Here again I cannot but think that Harris has been somewhat hasty and
has not taken sufficient account of the transcriptional evidence. Surely,
postvocalic Latin *f* in such words as Plautine *rufe* 'healer, physician'
(pres. ptc. of *rp'* 'heal', page 147; cf. Hebr. *rōfḗ* < Sem. **rāpi'u*) and
Livy's *sufetes* 'governors, lawgivers,' inscriptional *sufes, sufete, sufetes*
(pres. ptc. of *špṭ* 'judge, govern', page 153; cf. Hebr. *šōfḗṭ* 'judge' <
Sem. **šāpiṭu*) is enough to suggest that such spirantization was the
rule in Phoenician as well as in Hebrew. This is supported by such
transcriptions as *Au-* and **Aυδ-* for *'bd* 'servant', i.e. *'aḇd-*, in certain
names (e.g. *Auchusor* < *'aḇd-kūsór, 'bdkšr*, page 129; Αυδασταρτος <
'aḇd-'astárt, 'bd-'štrt, page 130).

<div align="right">EDWARD SAPIR</div>

NOTES AND PERSONALIA

THE FIFTH INTERNATIONAL CONGRESS OF LINGUISTS will be held at Brussels, Belgium, on August 28 to September 2, 1939, under the high patronage of His Majesty the King of the Belgians. The Chairman of the Committee of Organization is Professor George van Langenhove, 45 Rue Ducale, Brussels, and the Secretary of the Committee is Professor René Fohalle, 154 Rue Fraischamps, Grivegnée. Voting membership in the Congress is by invitation, but additions to the membership may be made by the Local Committee upon proper recommendation.

SAMUEL KROESCH, Professor and Head of the Department of German in the University of Minnesota, and a member of the Linguistic Society of America since 1926, died on October 26, 1938. A brief account of his life will appear in our next issue.

EDWARD PORTER DAVIS, Professor of German and Dean of the College of Liberal Arts at Howard University, died in February, 1938.

He was born in Charleston, S. C., and received the A.B. degree from Howard University in 1907, and the A.M. and Ph.D. from the University of Chicago in 1911 and 1923; in 1933 he studied at the Schiller Academy in Munich. His entire teaching career was at Howard University, where he became Instructor in Latin and Greek in 1907, Associate Professor of German in 1913, and Professor of German in 1919. He was Acting Dean of the College of Liberal Arts in 1927–8, and became Dean of the same college in 1929, serving in that capacity until his death. As an administrator he had the high regard of his associates; as a teacher he held the admiration and respect of his students by his scholarship, his courtesy, and his thoroughness.

THE FOLLOWING NEW MEMBERS FOR 1938 have been received into the LINGUISTIC SOCIETY OF AMERICA subsequent to the last published list: J. Autrey Dabbs, H.D. Learned. Their titles and addresses are printed in BULLETIN No. 12, in the List of Members for 1938.

The following have been received into the Society as members for 1939, up to December 13, 1938;

Harry J. Alderman, B.A., Library Assistant in New York University; 214 New Main St., Yonkers, N. Y.; *Indo-European.*

Hugh Byron Carnes, M.A., Professor of Spanish, Tulane University, New Orleans, La.

Joseph Bruno Costanzo, A.B., 410 Riverside Drive, New York City; *Romance languages.*

Thelma B. DeGraff, Ph.D., Instructor in Latin, Hunter College; 400 W. 119th St., New York City.

Rosalyn Gardner, A.B., 205 New Graduate Dorms., Chapel Hill, N. C.; *Romance languages.*

William Matthews, Ph.D., Instructor in English, University of Wisconsin, Madison, Wis.

J. Richard Reid, M.A., Graduate Asst. in French, Syracuse University; 1505 E. Genesee St., Syracuse, N. Y.

Daniel F. Sheehan, M.A., Instructor in English, Michigan State College, East Lansing, Mich.; *semantics, Old Irish.*

W. G. Sirrine, Attorney-at-Law, 9 Manly St., Greenville, S. C.; *English.*

Sister M. Gertrude Louise Zils, C.S.C., Duns Scotus House of Studies, 832 Varnum St., N.E., Brookland, D. C.; *American English.*

Miss Avery Woodward, M.A. (Cantab.), Senior Staff Lecturer in Classics, Royal Holloway College of the University of London; Englefield Green, Surrey, England.

James J. Xupolos, M.A., 1038 Southern Boulevard, Bronx, New York City; *Spanish.*

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THE STATISTICAL TECHNIQUE AND HITTITE

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Through the kindness of Professor Sturtevant we have been supplied with information about Hittite to enable us to make a Hittite column for the distribution table[1] used in our study of Indo-European linguistic relationships by the quantitative method.[2] The distribution of plus and minus signs for the Hittite column is as follows:

Plus: 6, 7, 14, 22, 25, 26, 32, 36, 42, 45, 47, 52, 55, 64.

Blanks: 3, 4, 9, 15, 16, 27, 28, 29, 30, 48, 67, 68.

Minus: all the rest except 8.

Our entry 8 has to be subdivided into 8a and 8b. Hittite assimilates η and υn, but keeps η and υm separate. We therefore list 8a as plus and 8b as minus. In a number of entries we have had to interpret the Hittite situation in terms of our element-list, and possibly we have made some mistakes.

The Q_6 coefficients obtained from these data are as follows:

Hittite-Celtic	.23
Hittite-Italic	−.01
Hittite-Greek	.08
Hittite-Armenian	.24
Hittite-Iranian	.05
Hittite-Sanskrit	.11
Hittite-Slavic	.02
Hittite-Baltic	.08
Hittite-Germanic	.08

The range is from .24 to −.01; the average is .10.

These coefficients are rather amazing and demand explanation, because it is difficult to believe that Hittite is more closely related to the various Indo-European languages than several of them are to each other. At least two possible explanations suggest themselves to account for these unexpected results. Let us examine them both. By doing so we may incidentally throw some light on the statistical technique.

[1] LANG. 13.94 (1937).
[2] LANG. 13.83–103 (1937).

In the first place the high percentage of blank entries in the Hittite column makes us wonder if the trouble does not lie here. In the original table we have blanks (indicated in that table by question marks) only in the Celtic column (one blank) and in the Armenian column (four blanks). Thus the pairs of languages of which Celtic is a member are short one entry (1.3%); the pairs of which Armenian is a member are short four entries (5.4%); and the Armenian-Celtic pair is short five entries (6.7%). But when we put Hittite into the table, the pairs of which Hittite is a member are short twelve entries (16%), and Armenian-Hittite is short sixteen entries (21%). Can we say then that the large number of blank entries has thrown our results off? The answer is apparently No. This conclusion was reached in this way. If we revise the distribution table, omitting all elements for which a blank occurs, we get a table of 59 elements. This involves omitting the following elements: 3, 4, 9, 15, 16, 26, 27, 28, 29, 30, 38, 39, 44, 48, 67, 68. The Q_6 coefficients established by this revised table come out as follows:

	Ce	It	Gr	Ar	Ir	Sk	Sl	Ba	Ge	Hi
Ce	1.00	.85	−.29	−.43	−.21	−.25	−.01	−.09	−.01	.29
It	.85	1.00	.03	−.46	−.65	−.59	−.39	−.26	.16	.13
Gr	−.29	.03	1.00	.19	.18	.15	−.32	−.28	−.21	−.07
Ar	−.43	−.46	.19	1.00	.02	−.01	.22	.02	−.25	.17
Ir	−.21	−.65	.18	.02	1.00	.94	.32	.004	−.36	.07
Sk	−.25	−.59	.15	−.01	.94	1.00	.40	.09	−.50	.13
Sl	−.01	−.39	−.32	.22	.32	.40	1.00	.84	−.39	.002
Ba	−.09	−.26	−.28	.02	.004	.09	.84	1.00	.21	.07
Ge	−.01	.16	−.21	−.25	−.36	−.50	−.39	.21	1.00	.12
Hi	.29	.13	−.07	.17	.07	.13	.002	.07	.12	1.00

These are a good deal like those of the seventy-four element table published in our previous study. Likewise the grouping of languages comes out much the same. Here the range of Hittite coefficients is from .29 to −.07, while the average remains .10 as before. In other words, the presence of blanks in the columns doesn't seem to make a great deal of difference.

Another possible explanation which suggests itself is that our Indo-European element list is not sufficiently pertinent to Hittite. Suppose for instance that we had investigated by an element list the interrelations of nine Malayo-Polynesian languages, and then applied this list to Hittite. Since there is no indication of genetic relationship between Malayo-Polynesian and Hittite, the Malayo-Polynesian element list

would be irrelevant to Hittite. We could expect the Hittite coefficients to come out fairly uniform. Tagalog and Maori might turn out to have a lower coefficient of similarity than Hittite-Tagalog and Hittite-Maori. This result would not prove Tagalog and Maori to be less closely related to each other than both are to Hittite. It would indicate that Hittite and Malayo-Polynesian were presumably unrelated, and that therefore the testing of Hittite by a list designed to bring out the relative degrees of relationship among the related members of the Malayo-Polynesian family, was a meaningless procedure. It might have meaning in another connection. Suppose that Hittite and Tagalog showed a coefficient of .29 and Hittite and Maori of −.07, but Tagalog and Maori of −.43. We could then infer that certain factors had been at work with the result of happening to make Hittite and Tagalog converge independently in more features than Hittite and Maori happened to converge in. Such a finding might have significance in a study of convergence, that is, an inquiry into how often UNRELATED languages independently develop similar features; or in a study of contact influence and borrowing. This however would be an entirely different problem from the determination of the DEGREE OF SIMILARITY of genetically related languages included in one family.

Now this illustration cannot be transferred outright to the situation which we are facing, because no one alleges a genetic connection between Hittite and Malayo-Polynesian, but almost all scholars admit some degree of genetic connection between Hittite and Indo-European. The example however suggests that the degree of relationship is remote; so remote that the testing of Hittite by an element list designed to bring out the nearer interrelationships within Indo-European becomes a partly or mainly irrelevant and inapplicable procedure. This in turn implies that the primary division of the original stock (Indo-Hittite) was into (1) Hittite and (2) Indo-European, the latter subsequently dividing into 2a, 2b, 2c, etc., to form Italo-Celtic, Greek, Armenian, etc. Now this is precisely the view of Professor Sturtevant;[3] and to this extent, although through a negative result, our findings tend to confirm his interpretation of the nature of the relationship between Hittite and Indo-European. The very randomness (historic meaninglessness) of our results (i.e. the Hittite coefficients) from criteria (elements) which are statistically random and therefore yield meaningful results within Indo-European, confirms, so far as negative findings can confirm, the idea that Hittite is not Indo-European but a coordinate member with it of a larger Indo-Hittite.

[3] LANG. 2.29–33 (1926); Hittite Gr. 29–31 (1933).

THE PRIMARY CASES OF THE TOCHARIAN
NOMINAL DECLENSION

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The historical interpretation of the inflectional forms of Tocharian nouns has lagged behind for an obvious reason. The endings of the verbs show their IE affinities at once, and such changes as have occurred present no more obstacles to their explanation than those in the other IE languages. On the other hand the case endings of the nouns, most of all those of the nominative plural, e.g., -aṃ, -ñ, -ant, -u, do not recall directly any IE case formatives, and therefore at first seem to defy explanation. Nevertheless it is not possible that the Tocharian declensions have no IE antecedents at all, for such a contrast between the origin of nouns and verbs is inconceivable. Explanations of Tocharian case endings must take as their starting point IE conditions. This is the only line of attack which holds forth promise of attaining any results, and even in this way it cannot be hoped to settle once for all the history of every variety of declensional pattern. While the writer believes that he can make some suggestions which will win assent, he also recognizes that other details will necessarily be subject to change after maturer consideration.

As is indicated by the title, this study of the IE origin of the Tocharian declensions concerns only primary cases, i.e., the nominative and oblique (IE acc.) singular, dual, and plural, and the genitive singular.[1] It will be recalled that definite order was brought into the complex Tocharian system by establishing a distinct line of cleavage between the old inherited primary cases, which have just been mentioned, and a larger group of secondary cases of comparatively recent origin, which arose by grafting prepositions or adverbs on the oblique cases, the same

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[1] The genitive plural is classified as a primary case by SSS (i.e., Schulze, Sieg, und Siegling, Tocharische Grammatik) because it is not always based upon the oblique, but it is nevertheless omitted from consideration here because sometimes its form is plainly not of IE origin, and in other instances it borrows the ending of the singular, which distinctly puts it on the border line between primary and secondary cases.

endings being used for the three numbers (see SSS 36 f.). The latter obviously can contribute little or nothing to the study of the relation of Tocharian and Indo-European, and in spite of some unsolved questions of details, the nature and origin of the system as a whole is shown clearly enough in the Tocharische Grammatik.

It will at this stage be still impossible to include systematically the B-dialect in the discussion, since extensive collections of its forms are not yet available. However, if we may judge from such as are cited, this is not such a serious shortcoming as might be expected. Partially B shows forms which are quite similar to those of A, and partially its cases are clearly later developments which presuppose those of the latter, e.g., Toch. *klots* 'ear', clearly from IE -*to-s*, is extended by an *o* in *klautso* of the B-dialect.

1. THE NOMINATIVE PLURAL

The first and most fundamental problem will be to determine as far as possible the source of the strange plural endings of Tocharian. Such a search will give considerably more promise of results if we can know in what direction to look, in other words, if we can decide what the general character of these formatives may be. In the earliest stages of Tocharian studies Emil Smith, Tocharisch 31 (Videnskab-Selskabets Skrifter II Hist. Phil. Class. 1910 no. 51, Christiania 1911), expressed the opinion that these plural suffixes might be remnants of entire words meaning 'multitude', but neither Tocharian nor Indo-European apparently possessed any words with this meaning which could possibly have been the source of such endings as -*ntu*, -*äṃ*, etc. Thus Smith's suggestion is only a guess which, moreover, does not even have the support of intrinsic probability. While the semantic development presupposed is conceivable, the large scale on which this process, otherwise completely foreign to the IE language, must be assumed in Tocharian, is a prohibitive objection. Nor does it help much if we think of collective suffixes[2] instead of entire words as the source of the terminations of the plural. We also do not know of IE or Toch. formatives, e.g., with -*nt*- or -*n*-, which were exponents of collective use. On the contrary, the *n*, which plays such an important part in the formation of Tocharian plurals, from IE times was characterized by its function of forming words which designated individual persons and individual things. See Brugmann, Gr. 2.1.292 f.

[2] The neuter plurals in -*ā* from feminine collectives in -*ā* would be a parallel if any evidence for such an origin of any Tocharian plural could be found otherwise.

It seems clear, therefore, that the plural suffixes of Tocharian could not have been derived from any linguistic units which in themselves embodied an idea of plurality. Rather they were due to adaptation of parts of words which originally had no such significance. As was suggested in LANG. 9.26, at least those of more exotic appearance were stem-suffixes which had become plural endings secondarily, and as such they suggest some of the plural endings of modern Germanic languages. Thus the -er which is found in Germ. *Kind-er* beside sg. *Kind*, and is imbedded in the Engl. *children* beside *child*, is the IE suffix -es-. In the singular nominative the suffix (here -os, cf. Gr. γένος Lat. *genus*) was lost through phonetic change, but it remained in the plural as -er after the loss of the final vowel derived from IE ə, as in *genes-ə = Skt. *jánas-i*, Gr. γένη γένεα, Lat. *gener-a*. Similarly the -en of the weak declension, e.g., in Engl. *ox-en*, Germ. *Ochs-en*, became a plural ending by contrast with the singular (now Engl. *ox* Germ. *Ochse*) without the -n, which was lost secondarily in some nominative types, whereas in others (cf. Lat. *virgō*) its loss was of IE age. In the same way we may suspect that Toch. -äm and -ñ became plural endings by association with their singulars in which the stem-suffixes themselves had been lost.

The supposition that Tocharian plural endings originated like Germ. -er and -en receives further support from the similarity of the two languages in their treatment of final syllables. In both at least a final short vowel disappeared, and in both many final syllables consisting of a short vowel with a following consonant were also lost. On the ground that similar causes produce similar results, we may now turn our attention to the individual plural endings of Tocharian, and try to find more concrete evidence for the proposition. The most valuable proof of course comes from the few instances in which the very word in which a plural suffix occurs can be traced back to an IE word in which the same ending is a stem-suffix, but there are other indications in certain correspondences which are also decisive.

The plural endings of Tocharian are divided by SSS 90 ff. into two groups. In the first the nominative and the oblique cases have the same form. Bearing in mind that the Toch. oblique is the IE accusative, one can interpret this only as meaning that as a type these plurals correspond to the IE neuters, since the masculine and feminine genders in almost every instance distinguish between the two cases. A further support for this conclusion comes from the absence of names of living beings (SSS, loc. cit.) in this group (except one borrowed word). Names of persons as well as animals were normally masculine and feminine, and consequently were not drawn into this declensional pattern.

Of the plural endings of this class it is -*u* which shows its origin most clearly by a single IE inheritance. The singular *waṣt* 'house' forms the plural *waṣtu*. The former is the Greek ἄστυ 'city' and Skt. *vástu* 'place, thing' (cf. also *vāstu* 'place, house'), its final *u* having been lost like the other final short vowels. In the plural -*u* was shortened from -*ū*, the regular IE termination for the nominative plural of *u*-stems. It was a form of the type of Skt. *purú* 'many' and Hitt. *idalu*,[3] neut. pl. of *idalus* 'bad'. Thus Toch. *waṣt* and *waṣtu* were the direct descendants of IE **wastu* and **wastū*. Undoubtedly a similar plural is presupposed by *ākrunt* 'tears', the plural of *ākär* = Skt. *áçru* 'tear' < IE **aḱru*. This **ākru* < **ākrū* was extended by the *nt*-suffix which itself had become a plural ending.

The source of the plural termination -*äm* is determined by the fact that three of the five words for which it is attested belonged to the old IE heteroclitic *r/n*-declension. Of these *ysār*[4] 'blood' belongs with Hitt. *eshar*, gen. *esnas* 'blood' and Skt. *ásṛ-k*, gen. *asnáḥ* 'blood' (the *r*-stem also in Gr. ἔαρ), and *por* 'fire' is Hitt. *pahhur*, gen. *pahhuenas*, for which variation between *r*- and *n*-stem is shown also by Gr. πῦρ and OHG *fūir* beside Goth. *fōn*, gen. *fūnins*. For *ytār*[4] 'way' the Lat. *iter*, gen. *itineris* 'way, road' shows the original heteroclitic *n*-stem (Benveniste, Origines 100 ff.). The latter arose by contamination of the original genitive **itinis* with the regular **iteris*, and in the same way are to be explained the Tocharian plurals in -*äm* added to the stem in -*r*. In terms of Indo-European[5] we could say **iterə + itenə = *iterenə*, and this is the Toch. *ytāräm*, final *ə* having dropped like other short vowels, and -*m̩* being merely the regular spelling for final -*n*. Similarly Toch. *poräm* would be derived from IE **pəurenə*, a contamination of **pəurə* and **pəunə*, and *ysāräm* from IE **esṛ(r)enə = *esṛ(r)ə + *esenə*. This process left -*äm* as the mark of the plural, and it was then extended to two other words: *wram-äm : wram* 'thing' and *plāc-äm : plāc* 'word'. The immediate pattern for the last two was probably a lost word which was identical with Hitt. *uttar*, gen. *uddanas* 'word, thing' rather than the semantically more remote, extant Tocharian *r/n*-words.

[3] In Hittite all IE quantitative vowel distinctions have disappeared, so that, e.g., *u* and *ū* are treated alike.

[4] The representation of IE *e* by *y* in these two words is puzzling, but the question of its origin does not affect the morphological aspects discussed here as long as there can be no doubt of the ultimate identity of the words compared.

[5] The reason for clothing this and other statements in IE terms is merely the desirability of avoiding commitment on vexed chronological problems which do not affect the questions discussed. That the process was actually performed in IE times is of course out of the question.

The origin of the originally neuter plurals in -*ant* is almost unambiguous at first sight, for the IE -*ont*- from which it is derived is everywhere the ending of the present participle of thematic verbs, and no other nominal formative can even be considered.[6]   Again phonetic decay of final syllables gives the answer to the question how this re-interpretation took place.   In the plural -*ont-ə* persisted as Toch. -*ant* after the loss of the final vowel, but -*ont*, the stem-form which functioned as neut. singular, was lost altogether, for not only did the short vowel of the final syllable disappear, but also the final -*t* and then even the *n* which had become final secondarily.   The supposition of the participial origin of -*ant* is confirmed by the verbal nature of most of the words which take this ending.   Some of them, in fact, can be interpreted directly as substantivized neuter participles.   Thus *klop* 'pain' (pl. *klopant*) is 'the paining (sensation)', *mańk* 'fault, delinquency, sin' (pl. *mańkant*) is 'that which is lacking', *ṣurm* 'cause' (pl. *ṣurmant*) is 'the causing (thing)', *yärk* 'obeisance, worship' (pl. *yärkant*) is 'the worshipping (act)'.   For others derivation of secondary uses from original abstract use can be assumed, and finds its parallel in the identical semantic development of abstracts elsewhere.   Thus *el* 'gift', with its plural *elant*, is like Engl. *gift*, originally denoting the act of giving, and then transferred to what is given;[7] *wles* 'activity, work' (pl. *wlesant*) is comparable to Engl. *deed* or *act*, which have come to express the result of the action; *ṣpäm* 'sleep, dream' (pl. *ṣäpnant*) came to designate what was seen in sleep in addition to the act of sleeping itself.

The plural suffix -*unt* has already been discussed in connection with -*u*. In *ākrunt* beside sg. *ākär* 'tear' it was due to the infection of the old plural **ākru* by the other plurals in -*nt*, and again a semantic factor played the main part.   The fact that the act of weeping is indissolubly bound to the tears it produces caused the association of the word for 'tear' with the *nt*- plural which had become to a large extent the exponent of abstract meaning.   Other plurals in -*unt* must have been due to the same kind of accretion of endings or were patterned after others that had this origin.   Thus for the *tärkrunt* : *tärkär* 'cloud' its formal similarity to *ākrunt* : *ākär* may have been the deciding factor, and the

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[6] It is true that IE knew denominative adjectives in -*went*- and -*ment*- (Skt. -*vant*- and -*mant*-), but Tocharian shows no signs of the previous existence of this category.

[7] It probably would be an error to connect the apparently passive meaning of these participial formations with the real passive use of Hitt. -*ant*- (see Sturtevant, HG 158).   We must assume that the latter is a secondary development, since the Hittite herein stands altogether by itself.

*šäktālyunt presupposed by the instrumental *šäktālyuntyo* (: *šäktālyi* 'sun'), may in turn owe its *-unt* to *tärkrunt*, having arisen in certain phrases in which sunshine and clouds were contrasted. The meaning of other words with plural in *-unt* is unknown, so that there is no possibility of tracing the connections which caused them to adopt the ending.

Another complex plural formative, with the same components as *-unt*, but in reverse order, is *-ntu*. At least partially it is the participial *-nt*-extended by the *-u* < IE *-ū* which was discussed above. This is shown by the prevalence of abstracts among the words which form this type of plural (SSS 95), e.g., *praskintu* : *praski* 'fear', *akappuntu* : *akappi* 'uncleanliness', *lyalypuntu* : *lyalypu* (= Skt. *kárma*), *ākālāntu*[8] : *ākāl* 'wish'. This feature clearly connects the *-nt*- of this ending with that of *-ant* (see above), and some of the concretes can be interpreted as of participial origin. That *wär* 'water' (pl. *wräntu*) originally was 'what is dripping', is suggested by the related Hitt. *hurnais* 'spray'. Two such words show other participial suffixes preceding the *-nt*- in the plural, and as final in the singular. The word for fruit is *oko*, with pl. *okontu* 'the growing things' (cf. Lat. *augeō* 'grow', etc.), but its *-o* is itself a complex participial ending of the preterite which represents the IE perfect participle (SSS 337 f.). For *ṣtām* 'tree' (pl. *ṣtāmäntu*) we may assume the *-m* to be the IE suffix *-mo-*, which often forms verbal adjectives and even participles, as in Lithuanian.[9] Thus *ṣtām* is to be derived from IE *ṣtā-* 'stand', and originally, like Germ. *Stamm*, denoted the trunk, standing upright, instead of the whole tree.

Nevertheless the possibility that the *-nt*- of *-ntu* is not of participial origin in every instance is suggested by the plural *ñomäntu* : *ñom* 'name'. The latter came from IE *nōmṇ with loss of the final syllable, but the *-än-* < *-ṇ-* was retained in *ñomäntu*. The added *-t-* suggests that of Gr. ὀνόματα pl. (< *-mṇtə) : ὄνομα, without our being able to affirm such a connection positively. It is just as probable that *ñomän* < IE *nōmṇ(n)ə was the older form of the plural, and that this was extended to *-äntu* through the influence of other plurals with this ending.

Several Tocharian plurals end in *-ā*. The most important ones are *lwā* : *lu* 'animal' and *puklā* : *pukäl* 'year'. These are apparently the old IE forms of the *o*-declension, and are to be compared with Ved. *yugá* : *yugá-m* 'yoke', OPers. *hamaranā* : *ham-arana-* 'battle', Lat. *juga*, Goth.

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[8] After consonants an *ä* necessarily appears before the *-nt*-. Historically it may either be a svarabhakti vowel, or *-änt*- is IE *-ṇt*-.

[9] So, e.g., *vēžamas*, OBlg. *vezomŭ* from *vežù*, *vezą* 'veho'.

yuka, etc. The retention of the long vowel -*ā* seems surprising in contrast to the shortening of final -*ī* and -*ū*, but the accent must be reckoned with. The consonantal *w* of *lwā* shows that Tocharian accented the -*ā* just as Ved. *yugā́*, and this put it in line with the monosyllables. It is also possible that final -*ā* retained its length under all circumstances, but the other evidence cannot decide the question.

The origin of the still rarer plural in -*wā* is made clear by *kursärwā* : *kursär* 'mile' beside the *u*-plural *kurtsru*. There were two ways of forming the plural of IE neuter *u*-stems. They ended in -*ū*, which produced Toch. -*u*, or they added the -*ā* of *o*-stems or the -*ə* of other stems to the *u*, with the result -*wā* or -*wə*. The former is the Tocharian -*wā* and the Latin -*ua* in *genua* : *genū*, whereas Hitt. *genuwa* can be either -*wā* or -*wə*. The second Tocharian plural of this type is *pältwā* : *pält* 'leaf' (cf. Gr. φύλλον, Lat. *folium*). Apparently *pält* comes from **pḷ-tu* (with suffix -*tu*-), and formed the plural in -*wā* as opposed to the -*u* of *waṣtu* beside *waṣt*.

As opposed to all of the plural endings so far discussed, which were derived from the terminations of IE neuters, and therefore were alike in the nominative and oblique, the IE masculines and feminines reveal themselves in Tocharian by distinguishing between the two cases. We must therefore look to the endings of the IE nominatives of the masculine and feminine genders and to the preceding word-forming suffixes as the source of those Tocharian plural formatives which form only the nominative but not the oblique case.

The most common suffix of this second group is -*ñ*. If we apply what has been learned from the plurals which were derived from the IE neuters, we may be certain that also -*ñ*, since -*n* does not appear in any IE plural formative, is the remnant of an IE word-forming suffix behind which the case ending disappeared. This consideration points to the origin of -*ñ* from the *n* of IE *n*-stems. The palatal -*ñ* implies the loss of a following palatal vowel, and this can be none other than the *e* of the plural ending -*es* of IE consonant stems. We may thus trace -*ñ* directly to IE -*n-es*, for short vowels with -*s* were among the final groups that disappeared completely in Tocharian.

Confirmation of the suggested origin of -*ñ* from IE *n*-suffixes comes from certain resulting correspondences of wider scope between Tocharian and IE declensional patterns. Thus the -*ā* of *ñäkteññā* 'goddess' evidently reflects the same IE -*ō* as Lat. *virgō* or *praedō*, Goth. *tuggō*, Skt. *rā́jā*. All of these are derived from the IE sandhi-form in -*ō* with loss of original -*n* beside the -*ōn* which is retained, e.g., in Gr. γνάθων 'pot-

belly'. In the plural *ñäkteññäñ* < IE *-ōn-es* the *-äñ* corresponds to the *-ān-* of Skt. *rájān-aḥ* and the *-ōn-* of Lat. *praedōn-ēs*, Gr. γνάθων-ες, and Goth. *tuggōn-s*. The correspondence becomes still more striking when we compare also the obl. (IE acc.) sg. *ñäkteññäṃ* < IE *-ōnṃ* (see Part 3), exactly like Skt. *rájān-am*, Lat. *praedōn-em*, Gr. γνάθων-α. Here final *-n*, as regularly, was written *-ṃ*, and the absence of the palatalization found in the plural *-ñ* shows the contrast between the lost non-palatal *-ṃ* and the palatal *e* of *-es*. The connection of the declension of *ñäkteññā* with that of IE *n*-stems is brought out still further by the fact that the plural in *-āñ* is obligatory for words with an oblique in *-āṃ*, which shows that the declension of *ñäkteññā* was not a merely fortuitous conglomeration of heterogeuous forms. See SSS 105.

A still more striking inherited pattern is that represented by the singular in *-i* beside the plural in *-yāñ*, e.g., *aśi* 'nun', pl. *aśyāñ*,[10] *kri* 'will', pl. *käryāñ*. The *-i* is IE *-ī*, which is the sandhi form of *-īn*, with IE loss of *-n*, and *-īn* in turn is the weak grade of the IE suffix *-yōn-* which is reflected by the Tocharian plural in *-yāñ* < IE *-yōn-es*. Thus Tocharian is here the most faithful representative of IE conditions, inasmuch as it was the only language to retain this ablaut variation as opposed to the levelling in the others. The *-i* of *aśi* is the *-ī* of Goth. *gamainei* and OHG *gameinī*, but these have *-īn-* also in the plural, e.g., Goth. *manageins* : *managei*. The *-yāñ* of the plural *aśyāñ* is the *-(i)yōn-es* of Lat. *reg-iōn-ēs*[11] and Gr. οὐρανίωνες, but the latter have the strong grade also in the nominative singular, e.g., *regiō* and μαλακίων.

The contrast sg. *-i* with pl. *-yāñ* made *-āñ* instead of *-ñ* appear as the case ending, and as such it was sometimes transferred to words in which it could not have been original, e.g. *sewāñ* : *se* 'son'. Also *-añ*, which must have come from IE *-on-es* (cf., e.g., Gr. τέκτονες : τέκτων), went beyond its original province, as is shown particularly by a number of IE *o*-stems which have adopted the ending: *kam* 'tooth' < IE *ĝombho-s* = Skt. *jámbha-ḥ*, Gr. γόμφος, OHG *chamb*, Engl. *comb* forms the plural *kamañ*. From *yuk* 'horse' from IE *eḱwo-s* (cf. Toch. B *yakwe*, Lat. *equos*, Skt. *áçva-ḥ*) comes *yukañ*, and *kukäl* 'wagon' (= Gr. κύκλος 'wheel') has an obl. pl. *kuklas*, which presupposes a nom. **kuklañ*.

New combinations with *-ñ* arose after it had become abstracted as

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[10] Often with assimilation of *y* to a preceding sound, e.g., *aśśäñ* beside *aśyāñ*.
[11] This statement of equivalence ignores the long *ē* of Lat. *-ēs*, which, of course, is known to be secondary.

plural case ending and could be attached ad libitum to a word of any type. Thus *riñ* : *ri* 'city', *āreñ* : *āre* 'plough'.

The palatalization of *n* to *-ñ* because of the original following *-es* has a counterpart in that of some of the words in which *nt* belongs to the word itself. The only substantive of this type is the word for 'king', which is *wäl* in the nom. sg., but shows the *nt*-stem in the obl. sg. *länt*. The nominative plural is *läñś*, *lāṃś*, or *lāś*, which arose from *-nt-es* by loss of the *e* and palatalization of the resulting *-ts* to *s*[12] (SSS 349 f.). Several adjectives form plurals of the same type. Thus from *kāsu* 'good' the plural masc. is *kraṃś*, with the same *nt*-stem as the obl. sg. *krant* and the fem. pl. *krant*. In the plural of *ārki* masc. 'white' beside *ārkiṃ* fem., masc. *ārkyaṃś* < *-nt-es* stands beside fem. *ārkyant* < *-ntə*, the latter, as so often, perpetuating the IE neuter.

Also the plural endings *-ṣ* and *-äṣ* are due to the palatalizing effect of the following *-es*. Thus *-ṣ* is from *-s-es* and this represents the IE nom. pl. masc. fem. of the *s*-stems, which accounts for the fact that Toch. *-ṣ* and *-äṣ* are confined to adjectives. Those in *-äs* come from IE *-es-es* and are of the same type as nom. pl. Skt. *su-mánas-aḥ* Gr. εὐ-μενεῖς < *εὐ-μενεσ-ες beside nom. sg. Skt. *su-mánāḥ*, Gr. εὐ-μενής. So, e.g., Toch. *klyom-äṣ*[13] < *-es-es* beside nom. sg. masc. *klyom* (= Skt. *árya-ḥ*) < *-es*, representing the encroachment of the IE neuter form in the masculine, which would have preserved the originally long vowel found in Gr. εὐ-μενής. The plurals in *-ṣ* belong to the adjectives and participles in *-u* and *-o* < *-āu* (SSS 337), and this shows their origin. Their nominative singular in *-u*, e.g. *yām-u*, participle preterite (IE perfect) of *yām-* 'make, act', comes from IE *-wes* or *-wos*, and thus shows that also in this group the neuter of the *s*-stem with its short vowel had encroached on the masculine-feminine. The *-s* of *-wes* was lost, as in all final syllables, except of monosyllabic words, and *we* or *wo* became *u*, as, e.g., in *cu* 'te' < IE **twe* = Gr. σέ, and, from original labio-velar, in *kus* neut. *kuc* = Lat. *quis quid*, Hitt. *kuis kuit*. The weak grade of IE *-wes-* was *-us-*, and this grade prevailed also in the Toch. nominative plural, whence, e.g., *yāmuṣ* < *-us-es*.

Except the fem. sg. nom. *-us* (e.g. *yāmus*), probably an analogical formation for original **-uṣi*[14] (cf. Skt. *vidúṣī*), and the oblique in *-usāṃ*,

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[12] This result implies that the first steps in the palatalization of the preceding *t* must have been completed before the loss of the following *e*.

[13] Since the *m*-participles and *m*-adjectives mostly were originally *o*-stems, the ending *-äṣ* here represents a spreading of the *s*-stem formation beyond its original sphere.

[14] That is, IE *-us-ī*, weak grade of *-wes-* with *-ī*, nominative of the feminine suffix *-yā-*.

as *nāṃtsusāṃ*, the other forms of the participial -*u* were infected by the
present participles in -*nt*-, whence, e.g., the obl. sg. masc. *yāmunt*, obl.
pl. masc. *yāmuñcäs*, nom. obl. fem. pl. *yāmunt* < IE -*ntə*. This created
the adjectival plural ending -*nt* beside -*ant* and -*unt* which have been
met in connection with substantival declensions.

The plural endings -*e* and -*i* are marked as phonetic variants by the
fact that -*e* occurs after *r* and *l* (palatalized by it to *ly*), but otherwise -*i*.
We may contrast the masculine plural *āṣtre* of the adjective *āṣtär* 'clear',
and *naslye* beside *nasäl*, also the isolated *pracre* from *pracar* 'brother',
with the same form of the adjectives *omäskeṃ* 'bad' (*omäskeñi*) and
asureṃ (*asureni*). Similarly, among substantives, *kowi* : *ko* 'cow', *koñi* :
koṃ 'day', and *riṣaki* : *riṣak* (= Skt. *ŕṣi-ḥ*). When -*i* occurs after *r*,
it is explained by the encroachment of the more frequent and regular
ending. So, e.g., *pācri* from *pācar* 'father', and *āṅkari* (only plural)
'teeth, fangs'.

These endings evidently both originated in IE -*oi*, the ending of pro-
nouns like *toi = Skt. *tĕ*, Gr. Dor. τοί, Goth. *þai*, nom. pl. of *to-.[15]
It was also transferred to nouns in Greek, as λύκοι 'wolves' : λύκος,
ἀγαθοί : ἀγαθός 'good', in Latin, as *lupī* : *lupus* and *bonī* : *bonus*, and in
hieroglyphic 'Hittite', as *enai* 'gods' : *enas*.[16] We must assume that
IE *oi* remained as *e* in Tocharian not only when accented, as in *ce*-
(extended by an analogical -*m* in *ce-m* 'these') = IE *toi, but that
even in unaccented words or syllables its normal development to -*i*
was checked by a preceding *r* or *l*, as in *āṣtre* and *naslye*. That on the
other hand unaccented -*oi* normally became -*i* is shown by the To-
charian enclitic pronouns, *ci* from IE *toi = Skt. *tĕ*, Gr. τοι, and *ñi*
(with analogical *ñ*- for *m*-) from IE *moi = Skt. *mĕ*, Gr. μοι.

In favor of the derivation of -*i* and -*e* from IE -*oi* of *o*-stems is also
the fact that beside the nominatives plurals in -*i* the obliques regularly
have -*äs*, which can be traced to IE -*ons* (see Part 2). Because also
-*ṇs*, the IE ending of the acc. (Toch. obl.) pl. of consonant stems,
yielded Toch. -*äs*, analogical transfer of consonant stems to the declen-
sional pattern of *o*-stems was facilitated, and this accounts for the
occurrence of a number of plurals in -*i* from nouns which originally had
consonantal stems. So most of the nouns of relationship: pl. *pācri* :
pācar 'father', cf. Gr. πατήρ, gen. πατρός; *ckācri* . *ckācar* 'daughter', cf.
Gr. θυγάτηρ θυγατρός. Among others may be mentioned: *tkañi* : *tkaṃ*

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[15] The fact that Toch. -*i* and -*e* are only nominative, but not oblique endings,
prevents their identification with the IE -*oi* of the neuter dual of *o*-stems, e.g.,
Skt. *yugĕ*.

[16] Cf. Hrozný, Congr. Ling. 1935 xix.

'land', cf. Gr. χθών χθονός; *mañi* : *mañ* 'month', cf. Gr. μήν μηνός (IE
*mēns).   Similarly the diphthongal stem *gʷou- 'bos' forms the plural
kowi beside sg. *ko*, as opposed to Gr. βόες : sg. βοῦς.

This completes the list of Tocharian plural endings except for -*aṃ*,
which suggests the -*äṃ* of certain heteroclitic nouns which was discussed
above.   It occurs in the plural of feminine adjectives when the corre-
sponding masculines form their plural in -*e*, i.e., it is found regularly
among adjectives in -*r* and -*l*, e.g., *āṣtraṃ* fem. pl. nom. of *āṣtär* beside
masc. *āṣtre*, *naslaṃ* beside masc. *naslye*.   Since these forms in -*aṃ* are
both nominative and oblique, we may be certain that they were of
neuter origin, as were so many other Tocharian feminines plural.   Thus
-*aṃ* goes back to -*onə*, and, like -*äṃ*, was the form of certain *n*-stems,
the two suffix forms varying only as to their vowel grade.   Just how
-*aṃ* the feminines became attached to the masculines in -*e* can only be
surmised.   It may have been due to the influence of the plurals in
-*äṃ*, of which three belonged to heteroclitic *r/n*-stems with -*r* in the
singular.   It is to be observed that the connection of -*aṃ* with adjectival
r-stems favors this supposition, and from these the ending eventually
went to the associated *l*-stems.   As far as the vowel *a* < IE *o* is con-
cerned, attention may be called to the fact that the corresponding
masculine -*e* and -*i* were *o*-stem endings, and that therefore also the *a*
of -*aṃ* may be assumed to have some connection with the original
stem-vowel.

2. THE OBLIQUE PLURAL

In contrast to the complex system of nominative plural endings the
oblique case of the plural presents a comparatively simple picture.
Either it is the same as the nominative or it has the ending -*s*.   The
former have been discussed in connection with the nominatives of the
plural, and it appeared that this identity of the two cases was character-
istic of such plurals as were derived from IE neuters although designated
as feminine in the Tocharian system.   This leaves the ending -*s* for
those which as a class came from the IE masculines and feminines.

Since the Tocharian oblique is the IE accusative, this fact points to
the origin of -*s* from IE -*ns*,[17] the only original ending for all words
which were not of neuter gender.   It follows, therefore, that final -*ns*
was treated differently from -*s* after other sounds.   There is no trace
of the -*s* of any nominative plural except in the monosyllable *toṣ* = IE
*tās, and also the -*s* of the nominative singular is confined to mono-

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[17] With syllabic *ṇ* (-*ṇs*) after consonants.

syllabic words, e.g. *kus* = Hitt. *kuis*, Lat. *quis*. The *-s* of the plural
was lost even in the isolated numeral *tre* 'three' from IE **treyes*. We
must therefore formulate the rule as follows: in words of more than
one syllable final *-s* was lost under all circumstances, except that *-tos*
became *-ts*,[18] and *-ns* always became *-s*. With this formulation the
singular *mañ* 'month' < IE **mēns* (cf. Gr. μήν μηνός, Lat. *mēnsis*) seems
to conflict,but it affords no difficulty to assume that it was due to the
influence of the plural *mañi*, infection of the singular by which is shown
anyway by the palatal *-ñ*. Thus *mañ* took the place of an original
*mas, just as Gr. μήν beside the plural μῆνες is an analogical formation
in place of μείς (cf. Dor. μής), the phonetic development of **mēns*.

The origin of *-s* from the IE accusative plural ending is particularly
clear in the *-äs* which occurs in such words as were derived from IE
consonant-stems as well as *o*-stems. In the form of a phonetic law
this means that both IE *-ņs* and *-ons* had become Toch. *-äs*. The latter
change is established by the invariable occurrence of obliques in *-äs*
beside nominatives in *-i*, which was seen to have been an *o*-stem ending.
Thus not only in substantives, as *napenäs* obl. pl. beside *napeñi* nom. pl.
and *napeṃ* sg. 'human being', but also in masculine adjectives, e.g.,
omäskenäs beside *omäskeñi* and *omäskeṃ* 'bad'. Since the prevailing
type of adjective was from IE times the combination of *o*-stems with
feminine *ā*-stems, the existence of this pattern among Tocharian adjec-
tives lends additional support to the derivation of the obl. *-äs* from the
acc. pl. *-ons* of *o*-stems.

That Toch. *-äs* also represents IE *-ņs* is shown by its occurrence in the
oblique alongside of plural nominatives in *-ñś*, which, as was seen
above, went back to the IE *-nt-es*, a regular combination of a typical
consonant stem with the requisite plural ending. Thus beside *lāñś*
(: *wäl* 'king', obl. *lānt*) < *-nt-es*, the oblique *lāñcäs* < *-nt-ņs*, and the
adjective pl. *krañś* (: *kāsu* 'good', obl. *krant*) has the oblique *krañcäs*.
The fact that these *nt*-formations show no other sign of *o*-stem influence
and are an irregular type which has resisted analogy in other ways,
forbids us to assume that *-äs* was here due to infection by *o*-stems in-
stead of being derived directly from *-ņs*.

After the partial origin of *-äs* from *-ņs* is once recognized, we can see
that also the *-äs* of original consonant stems which have adopted *-i* in
the nominative plural should be traced to *-ņs* rather than *-ons*, e.g.,
ckācräs (presupposed by the comitative *ckācräsaśśäl*), beside *ckācri* pl.
and *ckācar* sg. 'daughter', comes from **dhuĝh(ə)trņs* = Gr. θύγατρας.

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[18] See Part 4 for examples.

As was seen above, this ending -*äs* of the oblique plural, which was common to consonant- and *o*-stems, gave a foot-hold for the transfer of the nom. pl. -*i* from the latter to some of the former, and, conversely, the fact that such a transfer can best be explained in this way lends further support to the derivation of -*äs* from -*n̥s*.

Of ambiguous origin, but certainly old, is the obl. pl. *kos* beside nom. pl. *kowi* and sg. *ko* 'cow'. It may be contracted from **kowäs* (so SSS 123) and would then correspond to Gr. *βόας* < **gʷown̥s*, or it may come from **gʷouns* with consonantal *n*, as did Gr. *βοῦς*.

Certainly analogical were the obliques in -*es* beside nom. pl. in -*e*. Since the latter came from IE -*oi* which never appeared in the accusative, Toch. -*e-s* arose by secondarily adding the -*s* which had developed as case-characteristic elsewhere.

Most difficult are the many oblique forms in which -*s* takes the place of the nom. pl. -*ñ*. The following will illustrate some of the various types: *ris* obl. pl. beside *riñ* nom. and *ri* sg. 'city'; similarly *ṣulas, sulañ*, and *ṣul* 'mountain'; *kāpñes, kāpñeñ*, and *kāpñe* 'lover, beloved'; *sewās, sewāñ*, and *se* 'son'; and, among adjectives, fem. pl. *lāñcinās, lāñcināñ* from *lāñci* 'royal'. That many of these forms are analogical is clear, but their starting point is obscure. An oblique corresponding to the nominative -*ñ* < -*n-es* should come from -*n-n̥s*, but this would yield Tocharian -*näs* instead of -*s*. Most probably, therefore, the ending -*s* did not originate among *n*-stems, but became connected with the nominative -*ñ* secondarily. For the combination -*äs* it is obvious that *ä*-stem forms may have been involved. It may well have been like the ending of Gr. Cret. *τῑμάνς* : *τῑμᾱ́* 'honor', except for the secondary shortening of the *ā* in the latter, so that it was derived from -*ā-ns*. If this is the case, we can see how the connection of nom. -*āñ* with obl. -*ās* may have taken place. The IE *ā*-stem nom. pl. in -*ās* became identical with the sg. -*ā* after loss of the final -*s*, and after -*āñ* < IE -*ōn-es* had become a case ending elsewhere, it was extended analogically to the original *ā*-stems, which thus gained a means of distinguishing the plural from the singular. This left -*āñ* beside the old obl. -*ās*, and after this pattern also -*as* beside -*añ*, -*is* beside -*iñ*, etc. In favor of this connection of -*āñ* and -*ās* with original *ā*-stems is the fact that adjectival masculine nominative plurals in -*i*, the *o*-stem form, regularly go with feminines in -*āñ* and with obl. -*ās*, which was in the province of IE *ā*-stems.

3. THE OBLIQUE SINGULAR

With the exception of some adjectival forms in which -*nt* seems to have taken upon itself secondarily the function of forming the case,

the obliques of the singular can be divided into two classes, those
which are identical with the corresponding nominatives, and those
which are characterized by a final -ṃ (i.e. -n). In some words this is
added directly to the stem, in others the ending is -äṃ or -āṃ. This
difference reminds one of a similar difference in the plural (Part 2),
between those words in which the two cases there also are identical,
and those which distinguish the oblique by the ending -s.

Our first reaction to this layout would be to assume that substantives
of which nominative and oblique singular did not differ were IE neuters
without case ending, and that the others were IE accusatives ending in
-m or -ṃ, an assumption in accordance with the change of final -m
to -n (spelled -ṃ). Further consideration, however, causes us to meet
with difficulties everywhere, on the one hand because it is impossible to
find a phonetic basis for such an assumption (see below), on the other
hand because the existence of singular forms which are identical in both
cases does not coincide with that of the undifferentiated plural forms,
which have been traced to the IE neuter plurals. It is true that in
some instances such a parallelism does exist, and there is nothing in the
way of assuming that such words as a class represent the IE neuters.
Thus waṣt beside pl. waṣtu, ākär beside ākrunt, pältsäk and pältskant,
wram and wramäṃ, klop and klopant, śol and śoläntu, ñemi and ñemintu,
oko and okontu, all agree in distinguishing the oblique neither in the
singular nor the plural, and may be traced to IE neuters without mis-
givings. But alongside these occurs a large class in which nominative
and oblique are identical in the singular, but not in the plural, e.g.,
ri 'city' beside nom. pl. riñ, obl. ris, similarly ṣul 'mountain' beside
ṣulañ and ṣulas, ñkät 'god' beside ñäktañ and ñäktas, brāmaṃ 'Brahman'
beside brāmnāñ and brāmnās, oṅkaläm 'elephant' beside oṅkälmāñ and
oṅkälmās, kapśañi 'body' beside kapśiññāñ and kapśiññās, koṃ 'day'
and tkaṃ 'land' beside koñi and tkañi and the oblique pl. sarās 'veins';
pācar 'father' beside pācri and *pācräs (cf. gen. pl. pācräśśi), pracar
'brother' beside pracre and pracres, se 'son' beside sewāñ and sewās.
It is to be observed that most of these words designate living beings,
and that this is conclusive proof in itself that the identity of the nomina-
tive and oblique in the singular is not due to their being originally
neuters and having shifted their gender later.

The reason for the failure to distinguish the two cases in these words
becomes plain as soon as we realize that the final combinations of a
short vowel followed by either -s or -m are among those which are lost
in Tocharian. In this way the difference between -os nom. and -om
acc. was lost among o-stems, and in consonant stems Toch. -äṃ < IE

-ṃ was bound also to disappear. As evidence for the loss of -ṃ we may cite above all the indeclinable numerals in -ṃ, which of course could not have been lost because of the force of grammatical analogies. IE *septṃ, Gr. ἑπτά, Lat. *septem* is Toch. *ṣpät*; *dek̂ṃ, Gr. δέκα, Lat. *decem* is Toch. *śäk*; *newṃ, Lat. *novem* is Toch. *nu*. Since we may assume that IE -ṃ first became -äm and then -än before disappearing, we may compare also Toch. *ñom* 'name' < IE *nōmṇ = Skt. *nā́ma*, Lat. *nōmen*, in order to support the assumption of the complete loss of the syllabic nasal. We may consequently be certain that, e.g., the obl. *tkaṃ* < *-onṃ (cf. Gr. χθόνα) became identical with the nominative accidentally, i.e., through phonetic change, and similarly *pracar* 'brother' in its oblique use lost its ending -ṃ, and thus was identical[19] with Lat. *frātrem* beside nom. *frāter*. That the -om of o-stems also disappeared is equally clear. Again the best evidence is a numeral, the isolated IE *k̂ṃtom 'hundred' = Skt. *çatám*, Lat. *centum*, which became Toch. *känt*. We may also note the indeclinable *sam* 'equal, even'. Although undoubtedly also other factors entered into the result, it was clearly prepared for by the loss of its final syllables which destroyed the distinction between nominative and oblique as well as masculine and (IE) neuter in the singular. As nominative masculine *sam* is IE *somo-s = Skt. *samá-ḥ*, Gr. ὁμός, as neuter nominative and as oblique of both genders it is IE *somo-m = Skt. *samá-m*, Gr. ὁμόν. The same result, and here unassisted by other factors, took place in the declension of adjectives in -eṃ (< -oino- or -eino-?), although these were not otherwise indeclinable. Therefore the oblique as well as the nominative masculine always, and exceptionally the oblique feminine, end in -eṃ, which thus comes from -no-s as well as -no-m. See SSS 70 f. The conclusion seems inevitable that -om as well as -ṃ was lost in Tocharian, and that therefore the -ṃ of the oblique singular, at least in polysyllabic words, cannot go back directly to these IE case endings.

If this -ṃ was not the direct descendant of IE -m or -ṃ, what was it? It seems clear that more than one factor has entered into its growth, and can to a certain extent be recognized. In one considerable group the -ṃ can be nothing else than the n of n-stems, which, as has been seen, was also the source of the plural -ñ. This is certain in the case of *koṃ* obl. beside *kŭ* nom. 'dog', the only animal name which distinguishes the two cases. The latter is the Skt. *çvā́*, and comes from IE *kwō, whereas the former is from -n-ṃ and is to be compared with Skt. *çvána-m*

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[19] Except for the difference in the quantity of the *a*. Its shortness in Tocharian was no doubt due to some analogy.

and Gr. κύνα (except for the vowel grade). The origin of Toch. -*m̥*
from IE *n*-stems is plain also in those instances in which it occurs
beside the plural in -*ñ*. Here the contrast of unpalatalized -*n* (-*m̥*)
before a non-palatal vowel (-*n-äm̥* < -*n-m̥*) with the palatalized -*ñ* of
the plural (from -*n-es*) is particularly enlightening. Thus we find
ñäkteññām̥, obl. sg. of *ñäkteññā* 'goddess', beside nom. pl. *ñäkteññāñ*,
from -*ōn-m̥* and -*ōn-es* respectively. Similarly *śomim̥* 'girl' forms obl.
śomināṃ and pl. *śomināñ*. In fact every substantive (except one) with
an obl. sg. in -*äm̥* forms the plural in -*āñ* (SSS 105), and this is decisive
for assuming identity of the source of the nasal of the two endings.

It is not probable, however, that every oblique in -*m̥* goes back to the
IE stem-forming suffixes with *n*. For substantives, which seem to dis-
tinguish between nominative and oblique more rarely than not, there
would be no objection to so believing. On the other hand the adjec-
tives, in their variation between the two genders as well as their cases,
show features which remind one too much of the IE adjectives with *o*-
and *ā*-stems to believe that there was no connection at all. We have
seen that *omäskem̥* 'bad' < -*n-os* forms the nominative plural *omäskeñi*
< -*n-oi* and the oblique *omäskenäs* < -*no-ns*. Alongside of these obvious
o-stem forms one cannot but suspect that somehow or other the original
IE endings of the *o*-declension also made their way to *omäskenäm̥* obl.
sg. masc. (cf. IE -*n-om*) and *omäskenäm̥* obl. sg. fem. (cf. IE -*n-äm*).
That the obl. pl. fem. *omäskenäs* goes back to an *ā*-stem form (-*ā-ns*)
we have seen above, and in view of all of this one may be safe in assum-
ing that the non-extant nom. sg. feminine also belongs to the *ā*-stems,
so that it would be **omäskenä* (cf. the extant fem. adjective *lālaṃskā*
'tender'). For the feminines with their long vowel such an explanation
involves no insuperable difficulties. The neuter (Toch. fem.) plural
lwā showed that Tocharian must have retained accented final syllables
in -*ā* (IE -*ā* as well as -*ō*) in their original long quantity, and also in
ñäkteññā, which was traced to -*ō(n)* above, the same is presupposed.
We may therefore believe that -*äm̥* represents the generalized accented
form of IE -*ām*, which was at the same time helped by the existence of
the monosyllabic demonstrative pronoun which has the obl. feminine
täm or *täm̥* = IE **tā-m* Skt. *tā́-m*, Gr. *τήν*, etc. The explanation of the
masculine -*äm* is more difficult, but if we may assume that the neuter
demonstrative *täm*[20] was at one time also an unaccented form of the

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[20] Oblique forms in -*m̥* also occur: masc. *ca-m̥* and neut. nom. obl. *ta-m̥*.
That the preceding vowel is here *a* instead of *ä* may well be due to a secondary
development.

masculine, as its ending instead of the expected -*t* indicates, it is possible
that it was the analogy of the feminines together with the pattern
furnished by the demonstrative pronouns that caused the transfer of
the ending -*äm* to the masculine adjectives.   The strong influence of
the latter over the inflection of adjectives is paralleled by the genesis of
the German strong declension of adjectives, e.g., *guter* masc., *gute* fem.,
gutes neut. after demonstratives like *dieser, diese, dieses*.[21]   The need of
differentiating between the genders in the adjectives as well as in pro-
nouns of reference explains why in both instances only the adjectives,
but not the substantives, were affected.

Of the three varieties of the *m*-suffix of the oblique, mere -*m* occurs
in *ñäkteññä-m* beside *ñäkteññä* and *kom* beside *ku*.   It made its way
analogically to *käṣṣi-m* beside *käṣṣi* nom. 'teacher' and to Sanskrit
borrowings in -*i*, -*e*, and -*ā*, e.g., *kāñcuki-m* : **kāñcuki, yantrācāre-m* :
yantrācāre, Sisā-m.   The *o*-stem ending -*äm* was discussed as far as its
occurrence in adjectives is concerned.   If its origin was explained
rightly, its use in substantives was secondary, and in accordance with
this conclusion is its rareness in the latter use.   Except for borrowings
from the Sanskrit, it is found only in a few words which are apt to be
used in apposition with proper names or otherwise suggest the possibility
of adjectival origin: *cor-äm* : *cor* (a title), *nātkäm* : *nätäk* (= Germ.
Herr), *śom-äm* 'boy, youth' : *śom*.

Also the origin of the ending -*ām* has been discussed.   It should be
added that its abstraction as a unit from the stem-suffix of *n*-stems
could take place very easily in the paradigm *aśi* 'nun' beside **aśyām*
obl. and *aśyāñ* nom. pl., which, as was seen above, reflects the IE vowel
gradation -*ī(n)* of the nominative singular beside -*yōn-* of the other
cases.   Undoubtedly the absence of such an oblique is accidental, since
from these words no oblique of any kind is found.   We may therefore
reconstruct the assumed **aśyām* etc. without any misgivings, all the
more so because of the intimate connection otherwise between obliques
in -*ām* and plurals in -*añ*.

Ambiguous is the -*ām* which occurs in the oblique of a number of
masculine personal names, mainly agent nouns of various types.   Thus
from *kuntis-tsek* 'potter' ('pottery-molder', cf. Engl. *dough*, Germ. *Teich*,
originally perhaps 'means of molding something') an oblique **kuntis-
tsek-ām* is presupposed by its dative in -*ān-ac*, the participial *pekant*
'painter' forms the oblique *pekänt-ām*, and masculines in -*ik* form their

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[21] The process is well illustrated by the resulting modern forms, although it
really took place in a prehistoric period.

oblique in *-ik-āṃ*, e.g., from *kākmärtik* 'he who is majestic', beside its primitive *kākmart* 'majesty', comes *kākmärtikāṃ*. It is possible, but not probable, that these masculines represent a secondary extension of the *-āṃ* which was developed elsewhere. Much more probably the prevalence of agent nouns among them is not accidental, and as such they suggest the obvious similarity of their *-āṃ* to the IE *-ā-m* as found in compounds like Gr. καλλι-βόᾱν, accusative of καλλι-βόᾱ-s, originally an exocentric compound 'with beautiful sound' (: βοή), and then 'beautifully sounding', or ὑψ-αγόρη-ν from -αγόρη-s 'with lofty public talk, lofty talker'. If this is correct, it follows that the accent of these words on the final syllable must have protected their long quantity in the same way as that of *ñäkteññā* and the neuter plural *lwā*. The spread of *-āṃ* as accusative ending among other agent nouns was no doubt due to the advantage of a formally characterized oblique as opposed to the *-om* of *o*-stems which had disappeared except where restored by analogy as *-äṃ*.

The existence of an ending *-nt* for the oblique of certain participles and participial adjectives seem to follow from the comparison e.g. of *yāmu* nom. masc. (past participle of *yām-* 'do, make') beside obl. *yāmunt*, or *ārkyant* obl. beside *ārki* 'white', originally 'shining'. Since these *nt*-forms exist beside identical feminines plural *yāmunt* and *ārkyant*, it is obvious that they also were not case forms originally, but, as was shown above, were due to the infection of other participles by the *nt*-participles of the present. The fact that this contamination did not reach the nominative singular caused the *-nt* to look like a case suffix.

4. THE GENITIVE SINGULAR

Various types of IE genitives occur in Tocharian, including two which have resulted in forms that are altogether irregular from the point of view of the latter language. The genitive of *wäl* 'king, ruler' is *lānt*. As opposed to the oblique *lānt*, which was traced to IE *-nt-ṃ*, this must go back to *-nt-os*, being a form of the same type as Gr. φέροντ-os, genitive of φέρων 'bearing', or Hitt. *humand-as* from *humanz(a)* 'all'. The lack of palatalization in *lānt* gen. as opposed to the palatalized *lāṃś* < *-nt-es* in the nominative plural shows that it cannot have come from the suffix form *-es* found, e.g., in Lat. *ferent-is* : *ferēns*. An objection to the phonetic change here assumed might be made on the basis of a number of words which indicate that final syllables consisting of a short vowel between *t* and *-s* appear as *-ts* in Tocharian, e.g., *pats* 'husband' = IE *poti-s*, Skt. *páti-ḥ*, Gr. πόσις; *klots* 'ear' < *ḱleuto-s* (cf. Skt.

çrutá-ḥ 'heard', Gr. κλυτός 'illustrious'); śtwarāts 'fourfold' = Lat. quad-
rātus; similarly oktats 'eightfold' : okät 'eight', and āknats 'stupid', prob-
ably, as shown by B aknātsa, by quantitative metathesis for *aknāts,
and therefore exactly = Gr. ᾰ-γνω-το-s, Skt. á-jñā-ta-ḥ 'unknown'. It
seems, however, that -ntos was treated differently from other combina-
tions with -tos, for want or wänt is the Latin ventus, and the ordinals
pänt, säptänt, *oktänt, and śkänt also lost the -os,[22] cf. Gr. πέμπτος,
Lith. peñktas, septiñtas, aštuñtas, dešiñtas, Gr. δέκατος. On the other
hand the combination -nts is found only in a few Tocharian words of
which the earlier history is totally obscure, e.g., emts 'selfishness'. There
is therefore nothing in the way of accepting the otherwise obvious deriva-
tion of the genitive lānt from -ntos. That more forms of this type are
not preserved is due to the obvious inconvenience of a genitive which
could not be distinguished from the oblique singular. As a result ana-
logical genitives characterized by endings displaced the old forms of
other consonantal stems, e.g., tkanis : tkaṃ = Gr. χθών, pācri : pācar
= Gr. πατήρ.

The termination of IE u-stems is also preserved in one Tocharian
form, the genitive seyo : se 'son'. The B-dialect soyä (with o < u)
shows that se was contracted from the *suy which was all that was left
of IE *suyus = Gr. υἱύς after the loss of the final -us. The genitive
seyo is therefore from IE *su(i)yeu-s, a form like Skt. sūnó-ḥ, Goth.
sunaus, Lith. sūnaũs < IE *sŭneus. This identification presupposes
that final -s was lost in Tocharian even after a long vowel or diphthong,[23]
and this is confirmed by the absence of any -ās, -es, -is, etc., which
could possibly be traced to such IE terminations.

Corresponding to -o from IE -eus one would expect -e from the IE
-ois or -eis of i-stems, and such an ending does occur in a considerable
number of substantives and in all feminine adjectives extant in this
case. In masculines only very rarely, in oṅkälme, gen. of oṅkaläm
'elephant', and in a number of words borrowed from Sanskrit, e.g.,
prämne from brāmaṃ 'Brahman'. On the other hand all feminines in
-i and -iṃ form this type of genitive, e.g., nāśye : nāśi 'mistress', śomine :
śomiṃ 'girl'. Although i-stems as such were lost in Tocharian, and
although these formatives were not descended directly from IE i-stems

[22] For trit 'third' and the like see Part 6.
[23] In monosyllables, as shown by the pronouns kus = Lat. quis and the demon-
strative fem. nom. pl. toṣ = Skt. tāḥ, IE *tās, final -s was retained. To this
conclusion ko 'cow' presents no obstacles, since it occurs only as an oblique
(SSS 110), where it came from -wṃ, and was thus a form like Lat. bovem. The
nominative may well have been *kos, or it became ko analogically.

(-*i* from -*ī*(*n*)) beside full grade -*yōn*-, and -*im�* a subsequent extension of either IE *i*-stems or forms in -*ī*), yet one may suspect an ultimate connection in the sense that before the loss of the IE *i*-stems the latter had affected the declension of the other types in much the same way as the IE accusative of the type *poti-m = Skt. *páti-m* had induced the Skt. accusative *br̥hatí-m* beside the nominative *br̥hatí* in place of the original form in -*yā-m* as in Lith. *vėžanczą* beside nom. *vežanti*. In fact, directly parallel to the latter analogy is the adoption of the -*e* also by feminine adjectives in -*i*, such as *āṣtri* beside masc. *āṣtär* 'clear', certainly from the IE -*ī* which is found beside -*yā*- in feminine adjectives elsewhere. Consequently, e.g., fem. gen. *rtre* from *rtri beside masc. *rtär* 'red' = Gr. ἐρυθρός, Lat. *ruber*, etc. Also feminine adjectives in -*im�*, like the substantives in the same formative, have -*e* in the genitive, e.g. *klyomine* from *klyomim�* beside masc. *klyom* 'āryaḥ'. This almost complete dominance of feminines[24] which were subject to *i*-stem influence among genitives in -*e* thus justifies its connection with the ending of IE *i*-stems.

Only occasionally did the -*e* make its way to any other type of feminine. From *lānts* 'queen' is formed gen. *lāntse*, and similarly apparently others ending in -*s* and -*āñc*, e.g., *karmavāckāñce* from *karmavāckāñc*. Since the latter were Sanskrit borrowings, they do not tell us much about the progress of -*e* in native words. It is possible, as SSS 88 maintain, that it made its way to every type of feminine adjective as a counterpart to masc. -(*y*)*āp*, but as long as examples of any kind of genitive from other formatives are not extant, such a conclusion cannot be considered as certain.

The genitives in -*i* look as though they were phonetic variants of those in -*e*, but there is a prohibitive reason against such a supposition in the domain of their occurrence. Except for a number of foreign proper names only the nouns of relationship are found with this ending:[25] *pācri*, *mācri*, and *pracri* from *pācar*, *mācar*, and *pracar*. This marks

[24] The connection of -*e* with feminines also prevents taking it as derived from accented forms in IE -*oi*, which would correspond to the -*i* from enclitics in -*oi*. Of course the IE *moi, etc. were enclitic only, but such forms became accented secondarily in some languages, and in Tocharian the genitive *ke* (all three genders) from *kus* 'qui, quis' is certainly an analogical form of this type. Yet connection with it of the genitive ending -*e* would leave unexplained the pronounced feminine associations of the latter.

[25] Note, however, the ending -*y*, which occurs in [*ñā*]*kteññāy*, gen. of *ñākteññā* 'goddess' and in a number of proper names taken over from Sanskrit (SSS 86). If, as seems probable, this is the same as -*i*, it went from the nouns of relationship to the word for goddess, and there took the form -*y* after the stem vowel *ā*.

the -*i* as different from the -*e* which has been traced to the IE *i*-stems
and was almost confined to the feminine gender. Nor can it be the
remnant of the IE genitive suffix -*es*, since this combination has been
seen to disappear completely everywhere else. The -*i* is evidently ana-
logical and its sphere points to its origin. It is the -*i* of the enclitic
pronominal forms *ñi*[26] 'mei, mihi, me' and *ci* 'tui, tibi, te', which come
from IE **moi* and **toi*, so that their -*i* is unaccented IE -*oi*. It is not
difficult to see how -*i* went from these pronouns to nouns of relationship.
In the family circle the words for father, mother, brother, sister, etc.
perpetually alternate with the pronouns which refer to them, and this
affords the best possible opportunity for the infection of the declension
of the nouns by the pronouns. See LANG. 11.200 f.

More complex is the problem of the origin of the endings -*es* and -*is*.
They also cannot go back to IE -*es* for the same reason as -*i*. To pre-
serve -*s* a vowel must have followed originally. Since their -*s* is not
palatalized (contrast -*ş* from -*s-es* in the nominative plural), this could
only have been a non-palatal vowel, and this consideration leads to
the derivation of -*s* from IE -*so*, an *o*-stem ending found, e.g., in OBlg.
če-so < **kʷe-so*, Goth. *þis*, OHG *des* (perhaps also Gr. τοῦ < **το-σο*)
from IE **te-so*.

More difficult are the preceding vowels -*e* and -*i*. The former, as
elsewhere, points to an original *i*-diphthong. Because of the lack of
palatalization of the preceding consonant in the genitives *wras-es* and
yuk-es this could hardly have been an *ei*. Since *ai* plays only a very
small part in the formative parts of nouns and pronouns, *oi* is left as
its probable source, so that -*es* is to be derived from -*oiso*. Again
pronominal influence has been exerted on Tocharian *o*-stem forms, for
the *oi* of the singular in -*oiso* is to be explained as due to the analogy of
the old IE plural pronominal genitive in -*oisōm*, as in **toisōm* = Skt.
téşām, OBlg. *tĕchŭ*, or as in Hitt. *apenzan* (also from -*oisŏm*, see AJP
58.318 f.), and in Gothic adjectives, e.g. *blindaizē* gen. pl. masc. of
blinds 'blind'.

Ultimately identical with -*es* < -*oiso* was the more frequent -*is*. The
lack of palatization of preceding consonants is noticeable here too, e.g.,
tkanis gen. beside *tkañi* nom. pl., *āsānis* beside *āsāñi*. Consequently
the *i* of -*is* can come neither from IE *e* nor *i* nor *ei*, but must be the
unaccented IE -*oi*. At once the objection suggests itself that also the
-*i* of *tkañi* has been derived above from *oi* in spite of its palatalizing

[26] The initinal *ñ*- for the *m*- of **moi* came from the plural IE **nos*. See LANG.
11.200 f.

effect. Chronological differences must give the answer. Apparently
final -*oi* had not become -*i* before the palatalization of, e.g., *n* to *ñ*.
In originally medial but unaccented syllables it retained its original
quality until the process of palatalization had run its course, and when
later it also became *i*, it was no longer able to affect the preceding
consonants.

The theory that -*is* and -*es* both came from -*oiso* and consequently
were *o*-stem endings would receive considerable support if it could be
shown that original *o*-stems are found among the words which thus
form their genitives. In spite of the fragmentary extant declensions
of most Tocharian words some evidence to this effect is on hand. If
yuk 'horse' is IE *eǩwos* its genitive *yuᵏᵒs* < *ekwoiso* was one of the
oldest forms of this type. In case of *lwes* from *lu* 'animal' one may
point to the existence of the plural *lwā*, the neuter plural *o*-stem form,
as additional support for the proposition that it had a stem in -*o*-. The
latter also supports the explanation of -*es* as the accented form of -*oiso*,
since both *lwes* and *lwā* have become monosyllables which retain only
the formative vowel of the original final syllable, and apparently there-
fore belonged to the IE type of words with accented -*o*-, as Skt. *çōká-ḥ*
'glowing' or Gr. τροχός 'wheel'. Other Tocharian words with genitive
in -*es* have the weak vowel *ä* in the stem, which shows the syllable was
unaccented in Tocharian times. Thus *ñäktes* gen. of *ñkät* 'god' and
yärkes : *yärk* both imply accentuation of the -*es*. It is possible that
also the change of IE *eǩwo-s* to Toch. *yuk* along with that of the geni-
tive to *yukes* was conditioned by the accented suffix, for the B form
yakwe shows that an intermediate stage *yäkw- must have intervened.

The genitive in -*is* from unaccented -*oiso* goes back to an IE *o*-stem
in *wantis* from *want* or *wänt* 'wind' = Lat. *ventus*, Hitt. *huwantas*
(nom. pl. *huwantes*). That it went beyond its original sphere is shown,
e.g., by *tkanis* : *tkaṃ* 'earth' (cf. Gr. χθών), *mañis* : *mañ* 'month' (cf.
Gr. μήν, gen. μηνός), *akis* : *ak* 'eye' (cf. either Lith. *akìs* or Gr. ὄσσε
dual < *okʷye*), *waṣtis* : *waṣt* 'house' (Gr. ἄστυ). Nevertheless the nomi-
native plural *tkañi* was also an *o*-stem form and the general prevalence
of the ending -*is* with plurals in -*äṃ*, -*ant*, -*u*, and -*ntu* (SSS 83), which
were seen to have been derived from IE neuters by their lack of dis-
tinction between nominative and oblique in the plural, supports the
connection of -*is* with *o*-stems indirectly. Since the neuters in -*o-m*
were by far the most important class from IE times on, it is highly
probable that the *o*-stem ending -*is* < -*oiso* first became fixed as a
neuter formative among them, and then was transferred to the less

frequent classes, as the *u*-stem *waṣt*, the *nt*-stem *klop* (gen. *klopis*, pl. *klopant*), or the heteroclitic *r/n*-stem *por* 'fire' (gen. *poris*, pl. *poräm*).

That on the other hand not all genitives in *-is* belong to IE neuters can be seen, e.g., from *ri* 'city', gen. *riyis*, nom. pl. *riñ*, obl. *ris*; *ṣul* 'mountain', gen. *ṣulis*, nom. pl. *ṣulañ*, obl. *ṣulas*. There is of course no reason why *-s* from *-so* should not have been used with masculines also, and it might be mentioned that the masculine *nätäk* (Germ. Herr) presents a perfect specimen of a consistent declension which reflects that of IE *o*-stems, but with the usual pronominal influence: nom. sg. *nätäk* < *-ko-s*, obl. *nätkäm* < *-ko-m* (analogical, see Part 3), gen. *nätkis* < *-k-oiso*, nom. pl. *näcki* < *-k-oi*.

Superficially the genitives *tkanis*, *mañis*, *poris*, *tsaris* (: *tsar* 'hand'), and *akis* show striking resemblances to Gr. χθον-ός, μην-ός, πυρ-ός, χειρ-ός, and Lith. *akiẽs*. That all of this is illusive, and that the assumption of their identity cannot be possibly harmonized with Tocharian phonetic developments, has appeared from the preceding discussion of Tocharian genitive forms.

As opposed to all of these genitives which somehow or other go back to IE genitive formations, the Tocharian genitives in *-āp* and its conglutinate *-yāp* must have developed their case meaning in purely Tocharian times. Probably these forms are old prepositional phrases in which the governed preceding noun, used at first in the oblique case, was put into its stem-form by analogy to the inherited type of genitive. It is probable that this preposition, or rather postposition, was IE **apo*, Skt. *ápa*, Gr. ἀπό, Hitt. *appa*, Goth. *af*. If so, its use would correspond to that of the equivalent English cognate *of* and to that of the more remotely connected German *von*. That the governed noun preceded is in accordance with Tocharian habits, as is shown both by the suffixation of other original prepositions from which the secondary cases were derived (SSS 36), and by the fact that the large majority of words otherwise called prepositions are postpositions in Tocharian (SSS 281 ff.).

As examples may be mentioned: *kuntis-tsekāp* : *kuntis-tsek* 'potter', *pekäntāp* : *pekant* 'painter', *riṣakyāp* : *riṣak* 'rishi'. For the genitive of masculine adjectives this was the only permissible formation, e.g., *omäskenāp* : *omäskem* 'bad', *āṣtäryāp* : *āṣtär* 'clear'. That those genitives which belong to substantives are confined to names of rational beings supports the derivation of *-āp* from such a preposition, for the relation of ownership which is chiefly expressed by such genitives, is an incentive to a clearer and more emphatic formation as opposed to the vaguer IE genitive endings which express every kind of appurtenance,

and were therefore less fitted for the designation of ownership. Nevertheless, it must be observed that while such a prepositional origin of -āp is highly probable, it would be rash to insist that it must be *apo and nothing else. In view of Tocharian phonetic changes which obliterated all distinctions between explosives, and because of the uncertainty of the history of the long ā of -āp, it may just as well have been the remnant of some other preposition, e.g., it might be related to Gr. ἐπί or ἀμφί and OHG bĭ, Engl. by.

5. THE NOMINATIVE-OBLIQUE DUAL

The remnants of the dual in Tocharian show their IE origin in more ways than one. They have the same form for nominative and oblique (SSS 130), as does IE for nominative and accusative. They are almost entirely designations of parts of the body which exist naturally in pairs, the eyes and ears, the hands and the feet, etc., and in IE also this was the most characteristic use of the dual. Moreover, most of the words which occur in this number are IE words, as one would expect from an old petrified category which had ceased to be productive. Compare pärwān- 'eye-brows' with Skt. bhrū́-ḥ, Gr. ὀφρῦς; aśäṃ 'eyes' with Gr. ὄσσε du., Lith. akìs; śanwem 'jaws' with Skt. hánu-ḥ, Gr. γένυς, Lat. gena, Engl. chin; kanwem 'knees' with Hitt. genu, Lat. genū, Engl. knee; tsaräṃ 'hands' seems to be related to Gr. χείρ and Hitt. kessar; lymeṃ[27] 'lips' to Lat. labrum and Engl. lip. Even though the exact phonetic basis for the following three comparisons is unknown or disputed, yet there can be no doubt of some kind of connection between pokeṃ 'arms' and Skt. bāhú-ḥ, Gr. πῆχυς; between peṃ 'feet' and Lat. pēs, Skt. pā́t; between esäṃ 'shoulders' and Gr. ὦμος, Goth. ams, etc.

In view of this intimate connection between Tocharian duals and IE conditions and IE words, one would expect their forms to show IE affinities. At first sight, however, this expectation is not realized, for all Tocharian duals end in -ṃ, which may be IE -m or -n, and no nasal functions in a dual ending of the nominative in any other part of the IE territory. However, this -ṃ in Tocharian is seen to have been a secondary addition from the fact that the preceding vowel in every instance reflects an IE dual termination. Thus the pärwā- of parwān- (only loc. and instr.) corresponds sound for sound with Skt. bhrúvā, dual of bhrū́-ḥ, and its -ā- is the IE -ō which is the regular ending of masculine o-stems, e.g., Gr. λύκω. The transfer of this ending to a con-

[27] This etymology presupposes the origin of the m from earlier pm. For the y cf. note 4.

sonant stem is similar to that in Sanskrit, but in the latter it is regular, whereas in Tocharian this is an isolated instance. The disappearance of the u of the first syllable in *pärwā-* < **pr̥wā-* < **bhruwō* shows that the accent was placed on the final *-ō*.

In four Tocharian duals an *-ä-* precedes the final *-m̥*; and, as usual when not a svarabhakti vowel, *ä* corresponds to IE *e*. The IE origin of the Greek dual ending *-ε* in consonant stems had been suspected before because of the palatal affection of preceding syllables in Celtic duals (Brugmannn, Gr. 2.2.200), and now Tocharian affords definite proof of the early origin of this ending.[28] It is to be observed that *tsarä-* of *tsaräm̥* 'hands' is the Greek poetic χέρε (beside usual, but analogical χεῖρε), and that *aśä-* of *aśäm̥* 'eyes' is virtually the same as Gr. ὄσσε. The same ending in *esä-* (*esäm̥* 'shoulders'), *päśśä-* (*päśśäm̥* 'breasts'), and *klośä-* (*klośäm̥* 'ears'). At least in the last, however, the use of *-ä* as dual ending must have been very recent, for *klośä-* comes from **klotsä-*, and this is based on the *o*-stem nominative **kleuto-s* which became Toch. *klots*.

The other Tocharian duals end in *-em̥*, as *lymem̥*, *pokem̥*, *kanwem̥*, *śanwem̥*. The *e* which here precedes *-m̥* may be either the IE *-oi* of neuter o-stems, as in Skt. *yugé* : *yugá-m* 'yoke', or *-ai* of IE *ā*-stems, as in Skt. *áçvē* : *áçvā* 'mare' or OBlg. *rǫcě* : *rǫka* 'hand'. The evidence of the words in this ending is insufficient to determine whether one or both of these terminations were involved. It is probable, however, that *-oi* has at least played some part because of the existence of the dual *we* 'two', classified as feminine, but of neuter origin. It is the IE **dwoi* of Skt. *dvé* and OHG *zwei*, both neuter.

One feature of the Tocharian dual still needs an explanation. What is the source of the secondary addition, the *-m̥*, which now appears as the dual characteristic? The answer seems to me to be obvious. It came from the originally neuter plurals in *-m̥*, which also, of course, did not distinguish between nominative and oblique, and could be used in place of the dual and were so used in many instances from IE times on. The plural *-äm̥*, described above, already had the *-ä-* in common with a number of duals, and the addition of the final *-m̥* made the identity complete. Then after the pattern, e.g., *tsaräm̥* beside **tsarä*, when both were still in use, **pärwäm̥* took its place beside **pärwä*, and *pokem̥* beside **poke*, etc. That this process must have been completed very

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[28] The striking analogy *-ōs* (nom. pl. *o*-stems) : *-ō* (dual) = *-es* (nom. pl. consonant stems) : *-e* (dual) need not be discarded with the realization of the IE age of the *-e*. The process simply took place in IE or pre-IE times.

early is shown by the preservation of the originally short final vowel
-*e* in Tocharian -*ä*, which, in common with other short final vowels, was
lost completely when unprotected as well as when followed by conso-
nants. It follows therefore that the -*m̥* was added at a time when it
was still -*nə*, i.e., before even absolutely final short vowels had dis-
appeared.

6. REMARKS UPON THE NOMINATIVE SINGULAR

The complicated state of affairs in the nominative singular as revealed
by the classification of SSS 46 ff. has little to do with IE nominative
formation. As the authors indicate, there is no real case-sign in evidence
anywhere, and the nominative is usually characterized only negatively,
i.e., by the absence of the characteristics of the other cases. In this
result phonetic changes have played the main, but not the only part.
In connection with the preceding discussion of the other cases it was
brought out that short vowels when absolutely final and with following
final nasal or *s* in words of more than one syllable disappeared com-
pletely under almost all circumstances,[29] and this destroyed the endings
-*os*, -*is*, and -*us* of masculines and feminines as well as the -*om*, -*i*,
and -*u* of the neuter stems in a short vowel. Consonant stems evidently
had also suffered similar phonetic decay and were generally drawn into
the analogy of vowel stems. Of the dissyllabic stems with long -*ū*- and
-*ī*- there is apparently no trace, and even if they had not been lost it
is clear that only the vowel, but not the final -*s* could have been pre-
served. In view of this breakdown of the IE system it is of interest
only from the comparative, but not the Tocharian point of view, that
certain nominative Tocharian forms, which look exactly like others,
are nevertheless direct descendants of IE nominatives. Thus among
o-stems: *kukäl* 'wagon' is the Gr. κύκλος 'wheel'; *yuk* 'horse' is Lat.
equos; the adjective *rtär* 'red' is Skt. *rudhirá-ḥ*, Gr. ἐρυθρός; *sam* 'like'
is Skt. *samá-ḥ*, Gr. ὁμός masc. as well as *samá-m*, ὁμόν neut. The *u*-stem
*wastu = Gr. ἄστυ, Skt. *vástu* appears as Toch. *waṣt*, and the *r*-stem
nominative **mātēr* = Gr. μήτηρ, Lat. *māter* is Toch. *mācar*. Among
original monosyllables may be mentioned *tkam̥* 'earth' = Gr. χθών.

Although the difference between nominative and oblique was in most
instances obliterated automatically by the loss also of a short vowel
with final nasals, there were some exceptions. A difference that prob-
ably was retained was between the -*i* < IE -*ī(n)* in the nominative
singular and **-yām̥* < *yōn-m̥* in the oblique as also -*yāñ* < -*yōn-es* in

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[29] That -*tos* and -*tis* became -*ts* was mentioned in Part 4.

the nominative plural. Other such differences were got rid of by analogies, since they no longer fitted into the Tocharian declensional patterns. Thus when *potis* became Toch. *pats* its accusative *potim* must have changed to *pat*, but the latter disappeared and *pats* also functioned as oblique. The appearance of a word with -*s* as nominative singular ending was so entirely out of line with other Tocharian nominatives that it was felt to be a part of the word as such. Similarly *klots* 'ear', originally also only nominative, since it came from *kleuto-s*, based its dual on the form with the -*s*, for *klośäm* presupposes the stem *klots-*, whereas *klot-* would have yielded palatalized *kloc-*. In case of the ordinal numerals analogy worked in the opposite way. Instead of the nominative *trits* = Gr. τρίτος 'third' the obl. *trit* < *trito-m* = Gr. τρίτον was substituted, and similarly *śtärt* for *śtärts* = τέταρτος. This result was helped by the fact that the two cases had become identical by a phonetic process in those ordinals which ended in -*nt*, e.g., *pänt* = Gr. πέμπτος as well as πέμπτον.

In view of this situation a discussion of the various nominatives recorded by SSS would be mainly a discussion of the etymology and stem-formation of the words involved. That many or most of these are obscure, and that many phonetic problems which still await their solution would complicate the situation, is self-evident. However, even were this not the case, such an investigation, however important and interesting it might be, falls outside of the province of this article.

VOWEL-LENGTH IN GENERAL AMERICAN SPEECH

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Previous experimental investigations of English vowel-length have been confined principally to the Received Standard dialect of British English.[1] Though over thirty years old, Meyer's pioneering work on the lexical duration of vowels in the speech of a Londoner and an Oxfordshire man continues to be the only extensive collection of data on English vowel-duration. A start has been made, however, in the experimental measurement of American sound-length in two recent studies of quite different nature. In the first[2] the durations of sounds in a Middle Westerner's reading of a short piece of narrative prose were obtained from oscillographic recordings, and gross averages were computed for vowel and consonant durations. The second[3] measured lexical durations in 131 monosyllables with a final dental stop from the writer's own pronunciation, and set up several conclusions concerning American 'quantity' based on the relative values of the durations.

In the present investigation,[4] a study of lexical durations in the speech of five speakers of General American (GA), some of the mechanically controlled variations in GA vowel-length have been measured from the lexical pronunciation of 116 words of the type stop-vowel-stop and 33 of the type stop-vowel, spoken three times each by the five subjects.

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[1] E. A. Meyer, Englische Lautdauer, Uppsala-Leipzig, 1903; Alfred Ehrentreich, Zur Quantität der Tonvokale im Modern-Englischen, Berlin, 1920 (Palaestra 133). References to scattered measurements in the writings of Viëtor, Scripture, Jones, and others may be found in the first chapter of Ehrentreich's dissertation.

[2] C. E. Parmenter and S. N. Treviño, The Length of the Sounds of a Middle Westerner, American Speech 10.129–33 (1935).

[3] R-M. S. Heffner, Notes on the Length of Vowels, American Speech 12.128–34 (1937).

[4] The kymographic recordings upon which the following measurements are based were made in the laboratory of the Phonetic Institute of Hamburg University with the kind permission of its director, Professor G. Panconcelli-Calzia. The recordings were made with the usual mouth-funnel and larynx-recorder registering on a Zimmermann kymograph.

Out of the 2235 measurements obtained, it has been possible to ascertain the essential variations in the length of the vowel effected by the quality of the vowel and the nature of the initial and final stops, and to define the quantitative relations between the so-called 'short' and 'long' vowels in GA speech.

The five subjects chosen for the investigation were men between the ages of twenty and twenty-four, speaking the normal variety of GA characteristic of educated middle-class pronunciation in the urban centers of the GA area:

R was born in Brooklyn, N. Y., resided there until the age of sixteen, and spent four years each at Union College, Schenectady, N. Y., and Harvard University, Cambridge, Mass. RAPID, FORTIS SPEECH.

L was born in Hastings, Nebraska, lived in Chicago, Illinois, from the age of one to five years, and in Los Angeles, California, since. RAPID, FORTIS, EXAGGERATEDLY PRECISE SPEECH.

M was born in Mt. Vernon, N. Y., lived in Toronto, Canada, from the age of two to fourteen and in Philadelphia, Pennsylvania, since. SLOW, SEMI-FORTIS SPEECH, with absolutely no traces of Canadian pronunciation.

D was born in Chicago, Illinois, lived there till the age of ten, and in Glendale and Pasadena, California, since. SLOW, LENIS SPEECH.

H was born in Rochester, N. Y., and has lived there since. SLOW, LENIS, BUT NATURALLY DELIBERATE SPEECH.

The following list of words, with one of the particles *a, the, I, to, so* prefixed to each word, and so arranged that words with related sounds were not juxtaposed, was read off by each subject in lexical pronunciation (i.e., at a normal tempo, with natural stress, and in the level tone of assertion) and with a short pause between every two phrases:

> [i]   keep, deep, Pete, beet, teak.
>   keyed, *peed, bead, deed.
>   pee, tee, key, bee, Dee.
>
> [u]   coop, poop, goop, dupe, toot, boot.
>   boob, twoed, cooed, poohed.
>   too, coo, boo, do.
>
> [e]   cape, pate, date, gate, take, bake.
>   babe, paid.
>   pay, kay, bay, day, gay.
>
> [o]   cope, pope, dope, goat, boat, tocque.
>   code, toad, bode.
>   Po, toe, beau, doe, go.

[æ] tap, gap, pat, cat, bat.
dab, gab, cad, pad, bad, tag.

[ɔ] caught, bought, talk, gawk.
dawb, pawed, bawd.
paw, caw, daw.

[ɑ] top, pot, cot, got, dock, bock.
gob, cod, pod, bog.
pa, bah.

[aɪ] type, pipe, kite, bike, dike.
tied, guyed, bide, died.
pie, tie, buy, die, guy.

[aʊ] pout, tout, doubt, gout, bout.
cowed.
cow.

[ɔɪ] toyed, buoyed.
toy, coy, boy.

[ɪ] tip, dip, kit, pit, bit.
kid, bid, did, pig.

[ʊ] put, cook, took, book.
could, good.

[ɛ] pet, get, bet, deck.
deb, Ted, bed, keg, peg.

[ʌ] pup, cut, gut, butt, tuck, duck.
cub, pug, tug, dug, bud.

The average length of the vowels and diphthongs in hundredth-seconds for each of the five subjects and the gross averages for all five are given in the following tables:

	R	L	M	D	H	Av.
Before mediae:						
[i]	30.5	28.4	30.7	26.4	31.9	29.6
[u]	29.1	29.2	32.2	27.9	29.8	29.6
[e]	32.3	28.4	37.2	27.9	30.7	31.3
[o]	32.7	30.8	33.2	30.3	32.9	32.0
[æ]	32.5	32.6	35.6	31.6	35.9	33.6
[ɔ]	32.0	33.9	37.7	31.6	36.2	34.3
[ɑ]	31.9	33.4	37.5	32.6	33.6	33.8

	R	L	M	D	H	Av.
Before tenues:						
[i]	14.5	15.9	20.1	18.9	20.4	18.0
[u]	13.4	15.7	19.0	16.5	20.7	17.1
[e]	20.2	20.4	22.4	20.2	24.4	21.5
[o]	16.1	18.1	22.6	20.2	23.9	20.3
[æ]	[13.7]	21.1	26.0	21.7	25.4	[21.6]
[ɔ]	[26.7]	21.0	28.9	21.8	25.8	[24.8]
[ɑ]	16.7	19.4	27.1	23.3	24.0	22.1
Final:						
[i]	29.5	34.8	40.2	35.2	41.0	36.1
[u]	28.1	39.8	40.0	33.9	39.6	36.3
[e]	33.8	42.7	42.9	41.3	43.6	40.9
[o]	33.6	41.8	41.2	37.1	42.9	39.3
[ɔ]	34.9	43.7	40.5	33.1	41.8	38.8
[ɑ]	34.2	41.4	38.7	34.7	44.3	38.7
Before mediae:						
[ɪ]	18.3	20.6	21.3	18.0	22.3	20.1
[ʊ]	16.7	19.5	22.0	18.0	22.5	19.7
[ʌ]	18.6	22.6	25.5	20.6	22.6	22.0
[ɛ]	20.9	25.5	27.5	23.6	23.7	24.2
Before tenues:						
[ɪ]	12.4	13.6	16.6	12.6	15.9	14.2
[ʊ]	11.3	15.5	16.8	14.7	14.5	14.6
[ʌ]	14.2	15.2	18.2	16.6	16.6	16.2
[ɛ]	14.9	16.8	19.7	17.8	17.5	17.3
Before mediae:						
[aɪ]	35.8	39.1	39.6	33.9	39.3	37.5
[aʊ]	34.7	32.3	39.0	33.5	37.0	35.3
[ɔɪ]	34.4	34.4	38.0	33.8	41.5	36.4
Before tenues:						
[aɪ]	19.2	22.5	22.4	25.1	26.7	23.2
[aʊ]	21.5	22.9	24.4	24.2	26.0	23.8
Final:						
[aɪ]	41.8	44.4	42.2	44.9	45.5	43.8
[aʊ]	39.0	42.0	34.3	40.3	47.0	40.5
[ɔɪ]	38.7	43.6	43.2	44.2	47.5	43.4

1. It is at once apparent from the gross averages in the right-hand column for the vowels followed by a stop that the length of the vowel stands in some relation to its quality or the height of the tongue during

its articulation—the vowel generally being longer the lower its tongue-position. This gradation displays itself most regularly in the lengths of the tense vowels, with the single durations generally running, from short to long, [i u], [e o], [æ ɔ ɑ]—on the bracketed [æ] and [ɔ] lengths of R, see below. With the lax vowels the correlation is not as regular. L, M, and D have [ʌ ɛ] consistently longer than [ɪ ʊ] before mediae, but R's [ɪ] is about as long as his [ʌ] and all of H's vowels are of approximately equal length. Before tenues, however, the high-low progression of [ɪ ʊ]–[ʌ ɛ] is more regular, with the single exception of L's equally long [ʌ]–[ʊ].

In spite of the several irregularities among the vowel-length gradations in the above twenty groups of measurements, the general tendency to articulate high vowels more rapidly than low is clearly exhibited. The vowel-length correlation of high : low :: short : long has never displayed itself in any idiom as more than a physiological tendency operating with varying force from speaker to speaker and easily disturbed by other mechanical and dynamic factors controlling vowel-duration. Even in the material which gave Meyer the original insight into the correlation [ɑ:] and [ɔ:] were rarely quantitatively distinguished.[5] I have similarly found the same irregularity in the exhibition of this general tendency to hold for speakers of Welsh, High German, French, and other idioms.

The most striking deviation from the normal gradations in the tables is the extra-shortness of R's [æ] and the inordinate length of his [ɔ] before tenues. It appears to me likely that the [ɔ:] represents a carrying-over to the articulation before tenues of the over-long vowel especially typical of New York pronunciation of historical [ɒ] in words of the type *god* [gɔ:d], *dog* [dɔ:g]. The shortness of [æ] can again perhaps be connected with the qualitative shift of [æ] to [ɛ:] before lengthening consonants currently operative in various sections of the GA area. All five speakers pronounce a vowel distinctly higher than [æ] before mediae, R reaching a full-fledged [ɛ:] exactly comparable, but for the off-glide, to the vowel of *bear*. The shortness of [æ] before tenues compared with its length before mediae brings the new distinction into sharp relief.[6]

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[5] Englische Lautdauer 38–9.

[6] From a comparison of the single vowel averages of all five speakers it is clear that the rapid, fortis speaker R has longer high and mid vowels than the slow, lenis speaker D and approximately equal-length low vowels; roughly the same length high and mid vowels as the more drawling lenis speaker H, but emphatically shorter low vowels; and shorter vowels all around than the semi-fortis M, though M's low vowels are relatively more than twice as much longer

2. The tense vowels in absolutely final position have their shortest duration for [i u] in the speech of R and L, but [e o] are generally longer than [æ ɔ ɑ] for all speakers. This disturbance of what may be called the NATURAL VOWEL-LENGTH (Eigendauer) gradation is produced by the radical diphthongization of the vowels [e o] in final position. These vowels, slightly diphthongal when preconsonantal, before a pause become full-fledged diphthongs, [ej, ow], with lightly fricative second elements in both instances.

The parallel, but less consequent, diphthongization of [i u] to [ij, uw] is probably the cause of the comparatively long durations of these vowels in the speech of M, where they are as long as [ɔ ɑ] or longer, and in that of D where [i u ɔ ɑ], and of H where [i u ɔ], are likewise not quantitatively distinguished.

3. In all idioms heretofore investigated experimentally, a vowel before a (lenis) media is invariably longer than before a (fortis) tenuis. In GA this correlation is regular and marked. The following percentages of greater length which the vowels possess before mediae than before tenues have been computed from the tables above:

	R	L	M	D	H	Av.
[i]	1.1	.8	.5	.4	.6	.7
[u]	1.2	.9	.7	.7	.4	.8
[e]	.6	.4	.7	.4	.3	.5
[o]	1.0	.7	.4	.5	.4	.6
[æ]	[1.4][7]	.5	.4	.5	.4	.6
[ɔ]	[.2][7]	.6	.3	.4	.4	.4
[ɑ]	.9	.7	.4	.4	.4	.6
[ɪ]	.5	.5	.3	.4	.4	.4
[ʊ]	.5	.3	.3	.2	.6	.4
[ʌ]	.4	.5	.4	.3	.4	.4
[ɛ]	.3	.5	.4	.2	.4	.4
[aɪ]	.9	.7	.8	.4	.5	.7
[aʊ]	.6	.4	.6	.4	.4	.5

than R's as are his high and mid. In short, the lenes speakers have relatively longer low vowels than the fortis speaker and shorter high vowels. With the energy-types represented by these four speakers, then, AS THE ENERGY OF ARTICULATION INCREASES, THE GREATER THE CONSEQUENT LENGTHENING OF THE HIGH VOWELS.

[7] On the bracketed [æ] and [ɔ] percentages of R, cp. section 1.

The percentages of lengthening for the single speakers average, for the long vowels and diphthongs: R .88, L .64, M .53, D .46, H .42, and for the short vowels: R .43, L .45, M .35, D .28, H .45.[8]   For Professor Heffner's speech the averages are .79 for short vowels, .75 for long vowels and diphthongs.[9]

Meyer found that the relative lengthening of the long vowels under the influence of final mediae decreased as the vowel-length was greater or, equivalently, as the tongue-position of the vowel was lower.[10]   So [i u e o] exhibited lengthenings of .38 to .55, [ə ɑ ɔ] .26 to .31, with the diphthongal lengths falling within the first range.   This relation expresses itself as a sporadic tendency also in the present measurements: R and L have their greatest lengthenings of the tense vowels for [i u], M for [i u e], D for [u], H for [i].

4. A comparison of the vowel-durations in thirty-one pairs of words with identical vowel and final stop, but with voiced and voiceless initial (e.g., *deep-keep, bake-take*) displayed a clear tendency in the speech of R to pronounce a longer vowel after an initial media than after an initial tenuis.   The less regular exhibition of this correlation with L and M, and its complete absence from the pronunciation of H and D, suggest that this natural physiological compensation between stop-energy and vowel-duration (weaker stop—longer vowel) exercises a noticeable effect only where a certain minimum of energy is attained in the force of their articulation.

Although Meyer could not fix any regular influence of initial consonants on the length of the following vowel,[11] sporadic evidences of such a compensation have been found in Icelandic[12] and highly regular correlations in a Middle German dialect.[13]   In my own recordings of

[8] Here again (cp. note 6) it appears likely from the gradation of the averages for the five speakers that the degree of lengthening under the influence of lengthening consonants varies directly with the speed and energy of articulation of the individual speakers.   The only deviation from this rule in the above averages is the high percentage of H for short vowels where, however, the variations from speaker to speaker are otherwise quite minimal.

[9] Computed from the table on p. 130.

[10] Englische Lautdauer 43–4.   In computing the lengthening, Meyer divides the absolute difference between the durations before tenues and mediae into the arithmetic middle of the durations before both.   The following figures are accordingly not to be compared with those above.

[11] Englische Lautdauer 37.

[12] Stefán Einarsson, Beiträge zur Phonetik der isländischen Sprache 106-9, Oslo, 1927.

[13] Gregor Pallier, Untersuchung zur Quantität der Vokale und Konsonanten,

most of the Germanic and Romance languages the correlation occasionally displays itself clearly enough, but with no regularity from language to language or from speaker to speaker of the same language.
5. In addition to the quantitative effect of a voiced stop on tonic vowels, tense vowels and diphthongs are also subject to lengthening when articulated in absolutely final position. The following table gives the percentages for the lengths of the long vowels in final position in terms of their lengths before mediae:

	R	L	M	D	H
[i]	.97	1.23	1.31	1.33	1.29
[u]	.97	1.36	1.24	1.22	1.33
[e]	1.05	1.50	1.15	1.48	1.42
[o]	1.03	1.36	1.24	1.22	1.30
[ɔ]	1.05	1.29	1.07	1.05	1.15
[ɑ]	1.07	1.24	1.03	1.06	1.32
[aɪ]	1.17	1.14	1.07	1.32	1.16
[aʊ]	1.12	1.30	.88[14]	1.20	1.30
[ɔɪ]	1.13	1.27	1.14	1.31	1.14

In spite of the emphatic irregularities in the above table, several general remarks may be made concerning the quantitative behavior of the vowels in final position:

a. The rapid, fortis speaker lengthens simple vowels in final position minimally, if at all. This absence of lengthening must rest upon the greater tension of the articulatory muscles—cp. the SHORT final vowels retained in the tense articulation-basis of French. The historical diphthongs are, however, slightly lengthened, the second element becoming clearly fricative.

b. The speakers of slow semi-fortis or lenis pronunciation have approximately .2–.5 longer vowels in final position than before mediae.

c. The high and mid vowels [i u e o] are with M and D lengthened more regularly and more emphatically than the low-mid and low [ɔ ɑ], clearly because of the higher vowels' susceptibility to diphthongization.
6. The above sections have been concerned with the principal MECHANICAL determinants of GA vowel-duration, determinants which are

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vorgenommen an einer westdeutschen Mundart 92-4 Marburg, 1934. Cp. also 48–59.

[14] The average for [aʊ] rests upon the measurement of a single word.

generally operative in all speech. Peculiar to individual idioms, however, are variations in the system of etymological or historical determination of vowel-lengths which serve to differentiate lexical units. It is to the recently much-vexed problem of American 'quantity' that the measurements made of the five subjects will now be directed.

From the tables above[15] it is at once clear that there are no mutually exclusive duration-ranges for what are commonly called 'short' and 'long' vowels in the same position. Although before mediae the eleven GA vowels here treated fall into two clearly separate categories of length (29.6–33.8 hs. and 20.1–24.3 hs.), the same sets of vowels before tenues overlap (17.1–22.1 hs. and 14.2–17.3 hs.), 'short' [ɛ] being in the pronunciation of four speakers longer than the 'long' [u], and [u] and [ʊ] having approximately the same length (15.7–15.5 hs.) for L.

Duration in the GA vowel-pattern is clearly non-phonemic. 'Short', 'long', and 'half-long' are for this dialect not terms labelling psychologically intended and therefore rigidly distinguished 'quantities' or lengths among sounds of the same quality, but simply descriptive adjectives employed at the convenience of the phonetician to describe the relative durations of the same sounds in different positions or different sounds in the same position in the speech-habits of one or more individuals or speech-communities.

The classification of GA vowels into 'short' and 'long' must accordingly rest upon the natural grouping of the objective measurements into categories more or less clearly set off from each other, if these terms are to have any meaning. It has been pointed out that no such clearly demarcated groups of durations appear in the pronunciation of the five subjects. If, notwithstanding this overlapping, the GA vowels be grouped into categories according to length, the following division based mainly on the durations of the vowels before mediae may be taken as most nearly correct:

Long	[i u e o æ ɔ ɑ]
Short	[ɪ ʊ ʌ ɛ]

The quantitative classification of tonic vowels in British English according to present usage[16] and supported by Meyer's experimental measurements[17] is

Long	[i u e o ɔ]
Short	[ɪ ʊ ʌ ɛ æ ɒ]

[15] Pp. 101 f.

[16] See, e.g., Daniel Jones, An Outline of English Phonetics⁴ 216, Cambridge, 1934. I have omitted the vowels [ɑ], as in class, and [ə:].

[17] Pp. 38 ff.

The two systems of quantity accordingly correspond in having as long the vowels [i u e o], as short the vowels [ɪ ʊ ʌ ɛ].   GA departs from the older system of British English in pronouncing [æ] and [ɑ] (< [ɒ]) long.

In establishing a quantitative proportion between the short and long vowels above, the only pairs of sounds that can legitimately be compared are those of the same or nearly the same quality—i.e., tense and lax articulations with approximately the same tongue-position.   Of the GA vowels treated above only two pairs are unequivocally so related—[i] [ɪ] and [u] [ʊ].   The average greater length of the tense vowel is

		R	L	M	D	H
before mediae	[i]	.67	.38	.44	.47	.43
	[u]	.74	.50	.46	.49	.32
before tenues	[i]	.17	.17	.31	.50	.38
	[u]	.19	—	.13	.12	.43

The tense vowel is roughly half again as long as the lax vowel before mediae.   Before tenues the durational distinction between the lax and tense high vowels is in most cases considerably smaller, vanishing completely with L for [u] [ʊ].   H, however, and MD for [i] maintain substantial length differences even before tenues.

The length of a vowel in GA speech is then not only non-phonemic, but historically 'short' and 'long' vowels are no longer consistently or very emphatically distinguished in the time given to their articulation. The primary duration difference between GA vowels is produced, not by their etymological descent from short or long Middle English vowels, but by the nature of the following consonant.   [bɪt]–[bɪ:d] has succeeded the [bɪt]–[bi:t] opposition.

For the purpose of placing in perspective the ABSOLUTE lengths of the GA vowels and the relation of tense to lax in the GA vowel-pattern, the following table lists some vowel-length averages in monosyllables with final tenues obtained from recordings of native male speakers of standard High German[18] and French, together with the measurements obtained by Meyer and Professor Heffner.[19]

[18] High German Vowel-Duration, Harvard Studies and Notes in Philology and Literature 20.195–200 (1938).

[19] Were the GA long vowel averages to be based only on [i u e o] to eliminate the low vowels which have no correspondent short vowels, the ratios would be even smaller.   As noticed above, the distinction of tense and lax before mediae

	Short	Long	Rel. Dur.
General American: [ɪ ʊ ʌ ɛ]		[i u e o æ ɔ ɑ]	
R	13.2	17.4	1 : 1.3
L	15.3	18.8	1 : 1.2
M	17.8	23.9	1 : 1.3
D	15.4	20.4	1 : 1.4
H	16.1	23.5	1 : 1.5
[Heffner	16.3	21.9	1 : 1.4][20]
[British English: [ɪ ʊ ʌ ɛ ɒ æ]		[i u e o ɔ ɑ]	
L	17.1	24.7	1 : 1.4][21]
High German: [ɪ ʊ ɛ ɔ a]		[i: u: e: o: a:]	
Z	5.9	13.5	1 : 2.3
R	6.4	13.4	1 : 2.1
M	6.5	13.7	1 : 2.2
French: [ɛ ɔ a]		[ɛ: o: ɑ:]	
D	8.6	17.3	1 : 2.0
L	7.6	21.1	1 : 2.8

To summarize:

1. Meyer's correlation for the natural duration of the vowels (Eigen-dauer) holds with reasonable approximateness for GA.

2. GA vowel-quantity deviates from that of British English in the long pronunciation of the vowels [æ] [ɑ] (= British [æ] [ɒ]).

3. Vowel-duration is not phonemic in GA, the primary quantitative opposition between vowels being constituted by the differences in duration effected by the nature of the following consonant. The phonemic distinction between the so-called 'long' and 'short' vowels is their quality, and, as Professor Heffner has pointed out, this distinction alone should be marked in transcription.

4. The absolute durations of GA vowels in lexical pronunciation are notably longer than in High German and French, the relative durations of 'short' and 'long' shorter.

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is somewhat sharper than before tenues, but, if computed together with the latter, would raise the relative durations only minimally.

In all the cases below except two (French [ɛ] and [ɛ:], High German [a] and [a:]) the quantitative is accompanied by a clear qualitative differentiation.

[20] Computed from the table op. cit. 130.

[21] For the short vowel average, see op. cit. 44. The long vowel average is computed from the averages on pp. 38–9. It must be noted that Meyer measured the aspiration of initial tenues as part of the length of the following vowel.

CHIRICAHUA LOAN-WORDS FROM SPANISH

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The Chiricahua Apache,[1] in aboriginal times, occupied the territory centering about the junction of the Arizona-New Mexico state line with the international boundary. Since this region was explored and colonized by the Spaniards as early as the sixteenth century, the Chiricahua have probably been in contact with Spanish-speaking peoples for more than three hundred years.

However, the influence of Spanish on the language of the Chiricahua has been a slight one. In my dictionary, there are but nineteen words of indisputable Spanish origin. All other linguistic innovations which can be attributed to Spanish contact are either changes or extensions of meaning of older linguistic elements or recently formed descriptive compounds.

In the following list, the Chiricahua words are written phonemically. Except that the letters *b*, *d*, and *g* are employed to represent the Chiricahua intermediate stops, the orthography is that ordinarily used by Americanists.[2] The Spanish words are from the Mexican dialect of Spanish, not the Castilian.

ʔìgó·xà 'needle' < Span. *aguja*.

báń 'bread' < Span. *pan*.

bé·sò 'money, dollar' < Span. *peso*.

bìxó·lì 'beans' < Span. *frijole*.

màdá·yà 'organ pipe cactus, *pitahaya dulce*' < Span. *pitaya*, a variant of *pitahaya*.

màdé·yù 'bottle' < Span. *botella*.

màšgàlé- in *màšgàlé-ń* 'Mescalero Apache' (*-ń* is a native relative suffix) < Span. *Mescalero*.

ńtò· or *tò·* 'hundred' < Span. *ciento*. This form also enters into compounds with native words; viz., *dálè·-ńtò·* 'one hundred' (*dálè·-* 'one'), *nà·kì-ńtò·* 'two hundred' (*nà·kì* 'two').

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[1] An abstract of this paper was presented to the Summer Meeting of the Linguistic Society of America at Ann Arbor, Michigan, July 19, 1938.

[2] For a complete definition of the symbols employed, see my Chiricahua and Mescalero Apache Texts 3-4 (1938).

gàxê· 'coffee' < Span. *café.*

gàxê·dì 'plate' < Span. *cajete* 'a flat bowl of unburnished clay'.

gô·čì 'pig' < Span. *cocho.*

hà·ɣóń 'soap' < Span. *jabón.*

yó·s- in *yó·s-ń* 'God' (*-ń* is a native relative suffix) < Span. *Dios.*

sìlá·dò 'soldier' < Span. *soldado.*

-žá·lì in the compound *nà·kì-žá·lì* 'twenty five cents'[3] (*nà·kì* 'two') < Span. *reale.*

žì·gò 'rich' < Span. *rico.*

čìdìká·gò 'Chiricahua Apache' < Span. *Chiricahua.*

čì·lì 'chili' < Span. *chile.*

lô·gò 'crazy' < Span. *loco.*

It is evident from the preceding list that the adaptation of the borrowed Spanish words to Chiricahua phonology is essentially complete. The major substitutions are as follows:

1. Spanish accented vowels are replaced by Chiricahua vowels with either a high (∠) or a falling (⌒) tone. Unaccented Spanish vowels assume the low (⟍) tone in Chiricahua. An exception to this rule is *čì·lì* (< Span. *chile*) in which the final vowel has become confused with the relative ending *-ì.*

2. Spanish final *n* becomes syllabic high-toned *n* in Chiricahua. This is because it is confused with the relative ending *-ń.* Native Chiricahua words never end in *-n.*

3. The Spanish voiceless unaspirated stops (written *t* and *c*) as well as the voiced stops (written *d* and *g*) become intermediate unaspirated stops in Chiricahua. Exceptions to this rule are found in *ńtò·* < Span. *ciento,* and *čìdìká·gò* < Span. *Chiricahua.*[4]

4. The initial Spanish sound represented by *b* becomes *m* in Chiricahua. When this sound occurs medially, it is replaced by Chiricahua *ɣ* (a voiced palatal fricative).

5. The Spanish affricative written *ch* is replaced by the aspirated affricative *č* in Chiricahua.

6. Spanish initial *r* becomes Chiricahua *ž* but the medial *r* is replaced by Chiricahua *d.*

In only two borrowings is any violence done to Chiricahua phonology. The Spanish adjectives *loco* 'crazy' and *rico* 'rich' become Chiricahua

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[3] This compound is probably formed on the analogy of the American English 'two bits'.

[4] Chiricahua *t* and *k* are heavily aspirated sounds quite unlike the unaspirated Spanish *t* and *k.*

lô·gò and *žî·gò*, respectively. In Chiricahua native words, the phonemes
l and *ž* occur only in the medial and final positions.

All but two of the borrowed forms are nouns. These have, in all
cases, been borrowed in the singular and, as far as is known, none of the
features of grammatical treatment peculiar to Spanish nouns have been
taken into Chiricahua. On the contrary, the borrowed nouns are
subject to exactly the same grammatical treatment as the native nouns.
Thus, for example, *báń* 'bread' (< Span. *pan*) may take the Chiricahua
possessive prefixes: *šì-báń* 'my bread' (*šì-* 'my') *nì-báń* 'your bread'
(*nì-* 'your'), etc.

In the same way, the Spanish adjectives *loco* and *rico* have been
made subject to the Chiricahua grammatical form. But, since Chiri-
cahua possesses no adjectival form-class, the borrowed words have been
re-classified and re-inflected. Before proceeding to an analysis of this
phenomenon, it will be necessary to summarize briefly the pertinent
facts of Chiricahua word structure and classification.

Chiricahua words fall into three formal classes: nouns, verbs, and
particles. These are distinguishable, in the main, by two criteria:
the structure of the word and its degree of inflection. Thus, the noun
is either monosyllabic or dissyllabic and inflected only for the possessed
form, the verb generally dissyllabic and often polysyllabic and com-
plexly inflected, and the particle primarily distinguished by its complete
lack of inflection. Qualifying notions, such as are expressed by our
adjectives, are sometimes expressed by means of the particle, but are
more often symbolized by forms having verbal structure and inflection.

It is evident, therefore, that there were two choices in the classification
of *lô-gò* and *žî·gò*: they might be classified as particles or as verbs. In
Chiricahua, the latter course has been adopted and *lô·gò* and *žî·gò* are
considered third person forms of the verbs 'to be crazy' and 'to be
rich' respectively. Since this is the case, they are conjugable in the
other five persons just as are other such verbs in Chiricahua.

		'to be crazy'	'to be rich'
Sg.	1.	*lô·šgò*	*žî·šgò*
	2.	*lóǹgò*	*žìǹgò*
	3.	*lô·gò*	*žî·gò*
	3a.	*lôžìgò*[5]	*žížìgò*
Du.	1.	*lóhì·gò*	*žíhì·gò*
	2.	*lâ·hgò*	*žâ·hgò*

[5] The 3a person is employed when it is necessary to distinguish between two
third persons or when referring to a relative by marriage with whom a respect
relationship is maintained.

Chiricahua verbs are all divisible into two major parts, a prefix complex and a theme. The prefix complex includes two kinds of prefixes: derivational prefixes (adverbial and locative prefixes and postpositions) which stand farthest from the stem, and paradigmatic prefixes (indicating person, number, tense, and mode) which occur between the derivational prefix and the stem. The theme has three parts: a thematic prefix (which is always associated with a particular stem), a classifier (an element occurring directly before the stem), and a stem. The stem may be conjugated for mode, voice, and aspect.

The verbal paradigms in Chiricahua are, then, distinguishable from one another by the following criteria: the structure of the verb stem, the type of classifier used, the subject pronouns employed, and the tense-modal prefix included in the prefix complex. There are five modal conjugations: the imperfective, perfective, progressive, iterative, and optative. For the purposes of this analysis, however, it is only necessary to consider the imperfective conjugation.

The modal indicator for the imperfective is zero. The imperfective paradigm occurs in two forms: the conjunct imperfective, in which the derivational or thematic prefix is united directly with the following paradigmatic prefixes, and the disjunct imperfective, in which an element *hi-* is inserted between the derivational or thematic prefix and the paradigmatic prefixes. These two paradigms may be illustrated as follows:

	ni- ... *-cà·* 'to be big'		*hà-* ... *-čà* 'to burst into tears'
Sg. 1.	*ňšcà·*	Sg. 1.	*hà·ščà*
2.	*ńcà·*	2.	*hàňčà*
3.	*ňcà·*	3.	*hà·čà*
3a.	*ňžìcà·*	3a.	*hàžìčà*
Du. 1.	*ň·cà·*	Du. 1.	*hàhì·čà*
2.	*ndhcà·*	2.	*hà·hčà*

In the case of the verb *ni-* ... *-cà·* 'to be big', the derivational prefix *ni-* (reduced to *n-*) is combined directly with the subject pronouns (*š-*, first person; high tone, second person; zero, third person; *ži-*, third person, polite; length and low tone, first person dual; and *àh-*, second person dual), the zero classifier, and the stem. This is, therefore, the conjunct imperfective paradigm. The disjunct imperfective paradigm is illustrated by the verb *hà-* ... *-čà* 'to burst into tears'. Here the insertion of the prefix *hi-* between the derivational prefix *hà-* and the pronominal prefixes has caused the vowel of the former to lengthen in the first and third persons singular and has required the prefix *ň-*

in the second person singular, the prefix *hi·-* in the first person dual, and the prefix *-d·h-* in the second person dual.

It is now evident that the conjugations of *ló·gò* and *ží·gò* are disjunct imperfective in form. *ló-* and *ží-*, respectively, are obviously to be interpreted as thematic 'prefixes' requiring the disjunct treatment, and *-gò* in each case as the 'stem' of the verb.

It is also clear that this conjugation is a necessary result of the form in which the two Spanish words were borrowed. It has been noted that, with few exceptions, the accented syllables of Spanish words taken into Chiricahua become Chiricahua syllables with a long vowel and either a high or a falling tone.[6] Since the two borrowings under discussion were interpreted as third person forms of verbs with a prefix *ló-* or *ží-* and a stem *-gò*, the length and falling tone of the first syllable could only be regarded as due to the disjunct treatment.

It now becomes necessary to inquire into the grammatical function of the disjunct imperfective paradigm in Chircahua. The Chiricahua verb may have two sets of paradigms, the neuter and the active. Active verbs may be inflected in all five modal conjugations but neuters have only one conjugation. The neuter conjugation, however, may be similar in form to either the imperfective or the perfective paradigm of active verbs. Qualifying notions, such as are expressed by our adjectives, are generally symbolized by neuter verbs conjugated in the imperfective paradigm, whereas neuter verbs conjugated in the perfective paradigm generally express such ideas as position.

Since, therefore, the borrowed verbs *ló·gò* and *ží·gò* are conjugated in the imperfective paradigm, they may be either imperfective neuters of the verbs 'to be crazy' and 'to be rich', respectively, or imperfectives of the active verbs 'to become crazy' and 'to become rich'. A survey of the textual contexts in which these forms are used reveals that *ló·gò* and *ží·gò* can only be interpreted as neuter verbs. This conclusion is further substantiated by the fact that it is impossible to conjugate these verbs in the other four modes, which would be possible were these forms interpretable as active verbs.[7]

[6] The exceptions to this rule are those Spanish words in which the accented syllable (also the final syllable) terminates with an *-n*. In such cases, the *-n*, becoming syllabic and high-toned in Chiricahua, prevents the lengthening of the preceding vowel.

[7] As a matter of fact, one of my informants did conjugate 'to be crazy' in the other four modes exactly as if it had been an active verb. He was, however, uncertain as to the validity of all but the imperfective forms and I did not succeed in getting anyone else either to repeat his performance or to acknowledge the validity of the other four paradigms.

This conclusion as to the grammatical function of *lô·gò* and *ží·gò*, however, is not entirely consistent with the form of their conjugations. A careful examination of native Chiricahua imperfective neuters reveals the fact that all of them are conjugated in the conjunct imperfective and that, in every case, the stem is preceded by either *ni-*, *łini-*, or *dini-*, the so-called adjective prefixes. Formally, therefore, *lô·gò* and *ží·gò* may be classed with imperfectives of active verbs, whereas in function they are to be classed with imperfective neuters. It is undoubtedly this ambiguity which was responsible for the one instance in which an informant conjugated *lô·gò* as an active verb.

MISCELLANEA

HITTITE *tarkuwa(i)*-

The word in question[1] occurs a number of times in festival rituals; mostly in a stereotyped context. The most significant passage is KUB XX 38 obv. 13, the context of which reads as follows: (10) 6 SAL. MEŠ LUGAL-*i me-na-ah-ha-an-[da* ✕] (11) *iš-ga-ra-an-te-eš* ŠU. MEŠ-*ŠU-NU-[za]* (12) *ap-pa-an-zi ta ka-ru-uš-š[i-ia-an-ti-li²]* (13) *tar-ku-wa-an-zi pi-e-di-iš-[mi?* ✕] (14) ZAG-*ni* 1-*SU* GÙB-*li-ia* 1-*ŠU* (15) *me-e-ni-iš-mi-it* LUGAL-*i n[e-ia-an-ta-ri]* '6 women opposite the king (are) placed; they take one another's hand and *tarkuwanzi* sile[ntly]; in their places once to the right-hand side of the king and once to the left-hand side [they turn] their faces.' This passage suggests 'perform a round dance'.

This meaning fits in all other occurrences: KUB IV 1 IV 32 ff.; KUB VII 11 4 f.; 19 obv. 5 ff.; X 14 obv. 7; 48 II 5; XI 34 IV 17; XXV 9 V. 8; 51 I 10; XXVII 29 III 18. In most of these passages the ᴸᵁḪUB.BIL (or whatever the correct reading may be[3]) does the dancing; he is

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[1] The following forms are known: pres. 3rd person plural *tar-ku-wa-an-zi* (KUB VII 11 4; 19 obv. 6; X 14 obv. 7; XI 34 IV 17; XX 38 obv. 13; XXV 9 V 8; 51 I 10); *tar-ku-u-wa-an-zi* (KUB X 48 II 5); pret. 3rd person plural *tar-ku-e-ir* (KUB IV 1 IV 32); sup. *tar-ku-wa-an-zi* (KUB VII 19 obv. 8) (haplology—or haplography—for *tarkuwawanzi*); inf. *tar-ku-wa-ar* (KUB IV 1 IV 40b; VII 11 5).

[2] The supplement is conjectural, but the fact must be taken into account that the available space is limited. Hence it is absolutely certain that we have a form of *karuššiya*- 'keep quiet' more or less immediately before *tarkuwanzi*. Reference to *menaḫḫanda tarkuwanzi* in KUB VII 19 obv. 8 likewise suggests close unity of the passage quoted above in the text. The interpretation which would result, were Sommer's rendering of the verb by 'yell, cry' (see below) accepted, seems to me altogether unsatisfactory. The adverb *karuššiyantili* 'silently', attested in a different context KUB XXII 70 obv. 29, 72, would probably refer to the lack of musical accompaniment, i.e. to a situation opposite to that found in KUB X 89 I 25ff. (see below).

[3] Instead of ḪUB.BIL also ḪUB.BI occurs (KUB X 89 I 28). This, however, furnishes no decisive proof of the Akkadian nature of the term. ḪUB.BI may very well be a more phonetic spelling of a Sumerian word. And looking at it in the inverse direction, it must be said that BIL for Akkadian *bi/pi* would be rather unusual. Moreover, the comparison with Akk. *ḫabābu* which probably denotes some kind of a noise does not lead to any acceptable solution of the problem, particularly when KUB XX 38 (see above) is taken into consideration.

probably the professional 'dancer'.[4] We should know more of his art,
were KUB IV 1 IV 32 ff.[5] better understood.

Neither the Sumerian nor the Akkadian dictionary includes a word
ḪUB.BIL or *ḪUB-BI* in a suitable meaning. It is however worth
noting that the sign 'ḫub', according to Deimel, SL 88, is the picture
of a bent leg; furthermore that ŠU.ḪUB.ḪUB equals Akk. *sâru* 'to
dance' (SL 354 164). The second element of ḪUB.BIL may very well
be identical with b i l , b i equaling *ḫamāṭu*, an Akkadian verb which
unites the two chief meanings 'burn' (intr.) and 'move quickly'.[6]

Besides *tarkuwa(i)-* there exists in Hittite the very similar *tarwiške/a-*.
The occurrences favor the assumption that it too means 'dance'. Com-
pare, e.g., the passage KUB XXV 37 I 5 ff.: ᴸᵁQA.ŠU.DU₈.A-*ma*
tar-wi-iš-ki-u-an (6) *da-a-i* ᴸᵁNUḪATIM *ma-aḫ-ḫa-an tar-wi-iš-ki-it nu*
a-pa-a-aš-ša QA-TAM-MA (7) *tar-wi-iš-ki-u-an da-a-i pi-di-ia-aš-ša-an*
wa-aḫ-nu-uš-ki-iz-zi (8) *ta-ma-iš-ma-an* LÚ ᵁᴿᵁ*La-al-lu-pí-ia iš-ki-ša*
EGIR-*an* ᵀᵁᴳ*ši-ik-nu-un* (9) *ḫar-zi nu-uš-ša-an tak-ša-an pí-di wa-aḫ-*
nu-uš-kán-zi ᴸᵁQA.ŠU.DU₈.A-*ma* (10) ᴳᴵˢ*ḫu-ḫu-pa-al ḫar-zi-pít Ú-UL-*
at GUL-*aḫ-ḫi-iš-ki-iz-zi* 'And the cup-bearer starts dancing. As the
cook had danced, also this one dances in the same fashion; and he whirls
around on the spot. Another Lalupean holds a coat behind him and
together they whirl around on the spot. And the cup-bearer holds
likewise a drum(?), but he does not beat it.' Similar are in the same
text ll. II 15 ff. and III 31 f.(?). The ᴸᵁḪUB.BI (in this spelling!)
recurs as dancer in KUB X 89 I 27 ff.: ᴳᴵˢ*ar-kam-mi* ᴳᴵˢ*gal-gal-tu-u-ri*
(28) GUL-*an-ni-eš-kán-zi* ᴸᵁḪUB.BI.ḪI.A (29) *tar-ú-iš-kán-zi* 'they
beat the *arkammi* (and) the *galgalturi* and the ḪUB.BI dance.' Other
passages include KBo IV 9 I 43; KUB XI 17 III 3; XXVII 69 I 17.

It is a priori probable that *tarkuwa(i)-* and *tarwiške/a-* belong to-
gether. With two exceptions (KUB VII 19 7 and XXVII 29 III 18) no
forms with the suffix -*ške/a-* are found of *tarkuwa(i)-*, while on the
other hand no such verb as **tarwa-* is known. Hence, it can safely be
assumed that *tarwiške/a-* is the -*šk*-form of *tarkuwa(i)-*, in other words

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[4] In KUB XI 22 V 11 the ḪUB.BIL men 'turn' (*neiantari*), perhaps a term of
the art of dancing.

[5] The combination of *SAR-TU-U* (l.c. l. 35ff.) with Akk. *sâru* 'to dance' (see
presently) as an infinitive of feminine form is very tempting. If correct, we had
in these lines two kinds of 'dance' mentioned, the dance on the spot (*pedi-ši*;
cf. Goetze-Pedersen, Murš. Sprachlähmung 32) and the dance over a wider dis-
tance (*tuwaz*).

[6] Sum. ḫ u b . s a r and ḫ u b . d u(g), both equaling Akk. *lasāmu* 'sprint, run',
may also be pertinent.

that it is from and for *tark(u)wiške/a-. The loss of the first k is possibly due to dissimilation on account of the following k.

Sommer (Die akkadisch-hethitische Bilingue 42 f.), although he too has recognized the interrelation between tarkuwa(i)- and tarwiške/a- and the pertinence of the ^{LÚ}HUB.BIL,[7] reaches quite different conclusions. In his opinion the Hittite verbs[8] correspond to Akk. ramāmu 'roar'. This can hardly be maintained, when the passages just presented are taken into consideration. The karuššiyantili 'silently' of the passage quoted above, if correctly supplied, would exclude any meaning that implies a vocal utterance.

Sommer's starting point is the supine tar-wa-u-wa-an-zi of KUB XII 62 obv. 11, 13 which, it must be admitted, is used in speaking of a lion. I have myself (Kulturgeschichte Kleinasiens 149) proposed the rendering 'um zu toben(?)'. This was based on the occurrence of the obviously related nomen agentis ^{LÚ}tar-wi-eš-ga-la-as[9] in the vocabulary KUB III 94 (I 21) which, I believe (see Annalen des Mursilis 238), deals with the Sumerian ideogram KÌD. One of the meanings of KÌD—to be read in this case t a g ?—is Akk. ezēzu 'to rage' (SL 63,3; cf. Delitzsch, SGl. 155).

I still consider this combination correct; the more so since the second meaning of tarwiške/a- which must be inferred from it, namely 'to rage', is well reconcilable with the first meaning 'to dance'. The ritual dance (Akk. surtu[10]) was performed in a kind of a trance, and thus it was done throughout antiquity. Hence, Cicero could still say: nemo saltat sobrius nisi forte insanit. The fact should be pointed out that the pertinent Akkadian verb sāru 'to spring, to dance' is not only used in speaking of priests but also of storms and even of the heart, and this in so close a parallelism with words for 'to rage' that Delitzsch (HWB 496a, cf. also 647a) ascribes to the verb in question the one meaning 'toben'.

A word must be added on KUB XXIV 13 III 19 ff. (cf. III 4) where tar-ku-wa-an-da IGI.HI.A-wa of various officials and social classes occur

[7] The word is Akkadian in his opinion. He connects it with ḫubbu 'yelling, chant of mourning'.

[8] He supplies tar-ú-eš-ki-it (??) tentatively also in KUB I 16=2BoTU 8 II 14 as equivalent of the preserved Akkadian form i-ra-am-mu-um 'he roars, bellows'.

[9] One may suspect that this is a mistake on the part of the scribe for tar-wi-eš-ga-tal-la-aš; but one has to wait for at least one other occurrence, before this can be stated definitely.

[10] Cf. B. Meissner, Babylonien and Assyrien 2.87; furthermore the same author, ZA 15.145 f. and Jensen, ZDMG 67.510.

as the reason for mishap or illness; one has certainly to do here with some kind of evil eye. The investigation just made gives us the right to render *tarkuwanda šakuwa* by 'raging, enraged, furious eyes'.

There should also be mentioned the phrase *arḫa tarkuwa aušta* of KUB XXIV 7 III 21, where 'the bull' of the preceding line (see also ll. 15, 24) must be supplied as subject. In this story, if I understand the badly preserved remnants correctly, the hero seeks information on how to get children and how to identify them. It seems that he inquired of this bull; the bull [. . . . . . .] *arḫa tarkuwa aušta* 'looked [. . . . . . .] *arḫa*[11] *tarkuwa*' and said: 'I secre[tly . . . . and] it had four legs; but how could I have begotten this one with his two legs?' The *tarkuwa* probably conveys the idea of amazement or menace. Grammatically *tarkuwa* is in all likelihood an accusative plural neuter with an adverbial notion. The *tarku-* to which it testifies may be the basic word from which *tarkuwa(i)-* is derived.[12] Hence 'out of one's senses'[13] can be posited as its probable meaning.

ALBRECHT GOETZE

z FOR gh IN THE DEAN OF LISMORE'S BOOK

In LANGUAGE 14.303, Professor Urban T. Holmes, Jr., noting that the Dean of Lismore represents Gaelic spirant *g* by *z*, queries whether this might represent the pronunciation of the Dean's day or dialect.

This is not the case. The Dean merely borrowed an orthographical peculiarity from the Lowland Scots, who, in the fifteenth and sixteenth centuries, and perhaps longer, used the letter *z* to represent the sound of our consonantal *y*, at least after nasals and liquids. Thus we have the Lowland name *Dalziell* (Gael. *dal gheall* 'white meadow' or 'share'), also written and generally still pronounced *Dalyell*, *Daliell*. The place name *Lenzie* near Glasgow (Gael. *leanach* 'swampy') was earlier written *Lenyie*, *Lengze*. This orthographical *z* has generally been taken over into the English pronunciation of Gaelic proper names in which it was

[11] The *arḫa* may refer to a preceding ablative; the end of the preceding line is unfortunately mutilated. Perhaps 'he looked upon him out of his eyes *tarkuwa*'.

[12] For this type of derivation see Götze, Madduwattaš 81 ff.

[13] The same semantic development is to be assumed for Akk. *sāru* 'to dance' (see above) which ties up with Hebr. *sār* 'deviate, lose one's way'; note particularly *sārat ṭā'am* 'a woman who lost her sense', Prov. 11 22. Furthermore *ezēzu* 'to rage' (see above) is from *'azāzu* and belongs to Sem. *'zz* 'be strong, in high spirits'.

written, e.g. *Mac Kenzie*:*Mac Coinneach* [mɑ:xk kənnjəx], *Menzies* (earlier *Meyners*):*Meinnearach* [mɛnnjɛrəx].

Gaelic spirant *g* before front vowels approximates, of course, the sound of English *y*.   The Dean, however, extended his use of *z* to cover the sound of spirant *g* before back vowels also, precisely as we employ the digraph *ch* or the Greek chi to express the separate, although kindred spirants represented e.g. in Ger. *ich* and *ach*.   He wanted a separate and unique character for spirant *g*, and chose *z* because in normal Scots usage it approximated the sound of spirant *g* in some positions, and extended it to the others, since neither Scots nor any other language he is likely to have known contained a symbol for the sound of spirant *g* before back vowels.

<div align="right">WALLACE C. PAUL</div>

BOOK REVIEWS

The Wonder of Words: an introduction to language for everyman. Pp. xiv + 485. By ISAAC GOLDBERG, Ph.D. New York and London: D. Appleton-Century Co., 1938.

The late Dr. Goldberg had a sincere interest in language that began in his graduate days at Harvard, stimulated by such teachers as Ford, Grandgent, and Santayana, and kept alive by wide reading. He purposed in this volume to awaken the interest of the public in this subject, much looked upon as esoteric and yet one of vital concern to every speaking individual. The book was on its way through the press when the author died; a foreword by Professor Ford sets it in its proper perspective.

The topics of the twenty-two chapters are well selected for the author's purpose, and their succession is thoughtful and logical: Man, animal, and speech; The infancy of language; Sound becomes sense; The 'gesture' and the 'love' theories—and so on to Languages, races, and cultures; From speech to writing; Forward from Babel; To-morrow. The critique should be not of the purpose, nor of the planning, but of the execution.

It would appear to me, in reading the volume, that Dr. Goldberg was in all things too credulous; he was too much inclined to accept mere theories as facts, inasmuch as he, not a technical worker in the field, was unable to evaluate the views of others and to reject those views which cannot be regarded as valid. I give a few examples: *Communication* is the establishment of *oneness*, he says, and a *community* is a group that is united (2); the root of the word *commune* is the idea of oneness, of *unity*. The inevitable conclusion drawn by the uninitiate is that *community* and *unity* are etymologically akin, which they are not; even if Dr. Goldberg does not mean to give this idea, he does assert the fundamental identity of the underlying ideas of the two words. But it so happens that though *unity* denotes oneness, *community* denotes by origin a mutuality drawing or drawn together, so that duality lies at its basis and not unity. Again, he says (33) that Skt. *pañca* 'five' is related to the word for 'hand'; just how, he does not state, but this is certainly not true in Skt. nor in any IE language, though many non-IE languages use the word for 'hand' in the meaning 'five'. When he says

(34) that 'we still measure horses by *hands* and lengths by *feet*', he forgets that he has been speaking of cardinals and not of units of measure; a horse's height is measured in (widths of) hands and distances by (lengths of) feet, whereas he had just been speaking of a hand or a foot as '5' because of the number of fingers or toes.   When he says (125) that the Greek name *Megacles* means 'to great glory' he is mistranslating; the name means 'having great glory'.   In his account of Verner's Law (232), he makes mistakes in his accents of IE words, thus vitiating his exposition.   He accepts, without disagreement (245), a connection between Latin *siccus* 'dry' and *succus* 'moist', with a semantic change produced by the change in the vowel; in reality the two words are in no way connected.   The difference between *queen* and *quean* is said (270) to be one of a single vowel: a confusion of letter and sound, since the two words are pronounced alike, but belong to different dialects, which accounts for the different orthographies and different meanings. Latin *testis* does not start from the meaning 'testicle', as he states (276), but from the meaning 'witness'.   A baseball *fan* is a shortening of *fanatic*, not of *fancier*; but Goldberg (276) gives both theories, the wrong one first, without showing preference.   His remarks on grammatical gender (334–6) show an ignorance of the bearing of the Bantu noun-classes on this problem.   He is wrong (345) in finding a double negative in French *je n'ai rien*.   He is wrong (359) in regarding *tune* as an imperfect rhyme for *moon*.   The slang term *highbrow* he refers to the raised eyebrows (367), but it means 'having a high forehead'.   He quotes (375) a Mr. Urquhart as saying that to the Greeks the term *tyrannos* meant 'nothing more than a Turk', being from *Turan*, home of the Turanians: but the ancient Greeks, who used the term *tyrannos*, had never heard of the Turks.   His remarks on the semantic development of *noon* (376) could be corrected from Webster's Dictionary.   His list of IE roots (393–5) is based on the three-vowel system, outlawed sixty years ago.   And these items are but samples.

His linguistic citations are often inexact, even if we grant the limitations put upon him by the non-use of characters with diacritics.   Thus Skt. *varvara* (18) should be *barbara*; *Caius* Julius Caesar (129) should be *Gaius*, and *Quintilus* should be *Quinctilius*; Greek *angellos* (twice on 268) should be *angelos*; Skt. *spahy* (twice on 382) should be *sphay*.   At times his phonetics is at fault: he claims that *mi* becomes *pi* by a 'firmer conjunction of the lips' (56), which has nothing to do with it. He speaks of 'syllables without vowels' (222), because he fails to appreciate the existence of a vowel *r* (199).   He repeats (160) the old error

that *By Jiminy* goes back to Latin *Gemini* 'twins'; it is really a euphemistic shortening of *Je(su do)mine*, as is shown by the German form *Jemine*. He attributes (164) to Catullus the *animula vagula blandula* of Hadrian, quoted by Spartianus in his Life of that Emperor.

It is an unpleasant duty to speak in this fashion of a volume intended to introduce the general public pleasantly to linguistics; yet a warning must be given. If only persons like Dr. Goldberg, writing with honesty and enthusiasm, would have their copy thoroughly examined and corrected by a competent scientific linguist, we should have excellent works instead of merely well-intended works permeated with errors. The public should not be exposed to errors; it is bad pedagogy, for errors are remembered much more easily than correct things. And so I must recommend to the general reading public not Dr. Goldberg's volume on The Wonder of Words, but Bloomfield's Language and comparable works composed by trained linguistic scholars.

ROLAND G. KENT

I can agree with the reviewer in his praise of the author's purpose. We have, to be sure, two splendid works—Bloomfield's Language and Pedersen's Linguistic Science in the Nineteenth Century—that can be profitably read by a layman of the degree of intelligence supposedly implied by graduation from high school. The trouble is that each of these works demands of its readers serious application. We still need —and the need is crying—something less painful.

There is then a gap to fill, but it can be filled only by a linguist. Belief to the contrary is wide-spread: in the biting words ascribed to Goethe 'Jeder Mensch, weil er spricht, glaubt über die Sprache sprechen zu können'. That such a belief can survive an American education is a severe arraignment of the system. For all other sciences such delusions are eliminated quickly.[1] Who but a physician, unless perhaps a dietician, would seek, or could find, a publisher for The Wonders of the Digestive Tract? Yet Dr. Goldberg and his publishers have united to prove once more a thing that needs no proof—that similar respect is not accorded to Linguistics.

[1] At least outside of Colleges of Education. Recall the famous dialogue: 'Miss Jones, show us how you would teach a class in chemistry!'—'But, professor, I haven't studied chemistry.'—'That, Miss Jones, is irrelevant. Show us how you would teach a class of chemistry!' A sad blunder, professor. You would have escaped all criticism, had you called on Miss Jones to conduct a course in speech.

The outcome is what was to be expected: the hand of the amateur is in evidence from title[2] to index.[3]   I shall not add to the list of blunders collected by the reviewer, but wish to insist on their symptomatic nature; and to invite the reader to contrast the author's treatment, say, of the origin of language,[4] of Grimm's law, of phonetic change, or of semantic change with Bloomfield's handling of the same topics.   The defect goes too deep to be reached by any manuscript revision.   Linguistics is a science; and one must either become a scientist, or inhibit his impulses to speak on scientific questions.

Is there any good in the Book? Yes, unhesitatingly, yes.   I value the tribute (218 ff.) to the heroes of linguistic science.   Besides Goldberg had an enviable command of English, and was well qualified to testify to the usage of yesterday.   This testimony and what he has to say about his preferences for one feature rather than another are valuable data for the linguist.   Many too of the words he uses as examples are interesting; jewels, I may call them, that generally need resetting.

Like the reviewer I feel it a duty to write as I have written.   I wish that my remarks be taken as an expression of sympathy for the author and his publishers.   Both are victims of our system of education.

GEORGE MELVILLE BOLLING

Die Hauptprobleme der Indogermanischen Sprachwissenschaft. Pp. x + 226. By HERMAN HIRT. Edited by HELMUT ARNTZ. Halle/ Saale: Max Niemeyer, 1939. (Sammlung kurzer Grammatiken germanischer Dialekte.)

Hirt had a wonderful power of exposition: no subject was so intricate that he could not set it forth in a manner that fascinated thru the clarity of its arrangement and the simplicity of its language.   Never, it seems

[2] Contrast the attitude implied with Adelung's praise of Hervas as being the first to raise the collections of the Pater Noster from the position of a cabinet of curios to that of a tool for science; or with Kruisinga's objection to what must have 'het karakter van kuriositeiten', Het Nederlands van Nu 5 (1938).

[3] In which the names of Paul and of Bloomfield—the authors of the two standard works on methodology—are missing.

[4] To what happened eighty million years ago the author devotes (roughly) ten pages for every line in Bloomfield.   Yet the materials of linguistics do not permit it to reach back one hundredth of one percent of that time.   How far the author believes in the sun-worship of the lemurs, and in their glottal 'purr' *ur-ur* as the source of the [r]'s in *aurora* and in *urere* is not clear.   Noteworthy is his failure to point out that these [r]'s date only from c. 350 B.C., while the precursors of the Latin words can be traced further back for some two thousand years but with [s] sounds.

to me, did this gift show to greater advantage then in this posthumous work. That speaks volumes for the skill and tact of the editor who sometimes had at his command only rough drafts or even fragmentary notes.

The book, as was to be expected, adds little to what had been said in greater detail in the seven volumes of the Indogermanische Grammatik. Rather it is a selection of what appeared to the author to be the principal results attained in that work, a giving to them as a background the views previously held, and a pointing out of the directions in which they seemed to lead.

The book stands and falls with the Indogermanische Grammatik which is faced to the future; and to the future must be left the appraisal of their value. The proof of the pudding will be in the eating. I am content to repeat what I wrote in LANGUAGE 14.212: Hirt's 'work, in spite of some superficial defects, is too stimulating to be simply ignored.' Or, to put it in the words of Karl Helm, the editor of the series: 'Ein mann von der Gelehrsamkeit und dem Ideenreichtum Hirts hat Anspruch darauf, dass man ihn hört, auch wo man ihm nicht in allem folgt.'

<div style="text-align:right">G. M. BOLLING</div>

Formation des Noms et des Verbes en Latin et en Grec. Pp. 188. By A.-C. JURET. (Publications de la Faculté des Lettres de l'Université de Strasbourg, Fascicule 80.) Paris: Société d'Éditions Les Belles Lettres, 1937.

The author discusses in successive chapters the general elements of the Indo-European system of the formation of words as seen in their Latin and Greek survivals (vocalic alternations, root, derivation without suffix and with suffix, terminations); the nouns in Latin and Greek formed according to the IE types, and those made by still living processes; the declensions and their endings, in nouns and pronouns; the verbal formations of IE type in Latin and Greek, the living verbal formations, including tense and personal forms; indexes.

In the first chapter we find that Juret is a thorough believer in the doctrine of the consonantal shwas (Sapir's laryngeals) which are responsible for vowel variation and many other things; while I am not myself fully convinced of its validity (cf. LANG. 13.249–52), I am open to conviction, and definitely prefer the use of the inverted *e* with an inferior numeral, to Sapir's notation (LANG. 12.141), since the numerical notation makes it easier to remember the different workings of the

respective sounds.   My criticism of Juret's use of the shwas lies in the fact that he builds on them, to claim as original IE an almost infinite variety of forms, instead of explaining many of them as new formations within the separate languages.

Thus he thinks that *puer* shows the original IE ending and never had an earlier *-os* (95), and that *puertia* and *paupertās* never had a short vowel between the nominal stem and the suffix (17); that the nominatives *mascel* (16 inf.) and Ennius's *cael* (17.9) are original forms inherited from IE; that the *-i-* of '*i*-stems' is really only an addition, limited to a few cases (17–8), and that gen. *av-is*, dat. *av-ī*, acc. *av-em*, nom. pl. *av-ēs* are inherited forms of an *av-* stem, while the *-i-* has been later attached to the nom. *av-i-s* and a few other forms.   Just how he can reconcile this last view with well developed *-i-* declensions in Sanskrit, Greek, and Germanic I do not see; I do realize that his attitude toward *puer* and *puertia*, and the other forms cited above, is a corollary to his rejection of syncope of vowels caused by a heavy initial stress in primitive Italic.

This rejection of the effects of an initial stress (current in recent years among French comparativists, cf. LANG. 7.179–89, also 5.39) leads to other curious results.   He rejects the shortening of a final *-ā* in the nom. sg. of Decl. I, and in the nom.-acc. pl. of the neuter, considering these to be from *-ə₂* varying with *-eə₂* in Greek *-ā* of the nom. fem. (95, 97).   He disregards the fact that in these two categories Oscan and Umbrian show *-ō* from *-ā*.   Not believing in syncope, he regards Oscan *Bantins* 'Bantinus' as original and not from *-nos* (21.12), despite the fact that original final *-ns* in Oscan yielded *-ss*, as in acc. pl. **viass** 'vias' (*-ns* proved by Umb. *-f* in **vitlaf** 'vitulas').   Not believing that final short vowels may be lost in Italic, he thinks (137–8) that Latin never had *-ti* and *-nti* endings in the verbs, but only *-t* and *-nt*; the occasional *-d* in the sg. of the perfect he looks upon as a sandhi product, and the regular primary *-t* and secondary *-d* of Oscan he takes to be an apportioning of sandhi products for different uses.   He overlooks the fact that it is impossible to motivate such a differentiation, and also that in the plural Oscan has in primary tenses *-nt* (reduced to *-t*) and in secondary tenses *-ns* (cf. IF 53.41–4), a variation quite inexplicable under his premises of one ending only in the third persons, in Italic. For the same reason he thinks that the shortened imperatives *dīc dūc fac* are original (113); he cannot admit the loss of a final short vowel.

I might continue this critique for many pages, along the same lines, but refrain.   Juret's work suffers from his excessive individuality in his

attitude toward the development of the sounds in the separate languages, from the overworking of the results of the shwa-theory and of the theories in Benveniste's Origines de la Formation des Noms en Indo-européen, and from the taking of as much as possible to be original IE. This last is an unfortunate corollary of the views expressed by Benveniste, according to which any root may have as many different extensions and suffixes as there are sounds, if we push his view to its ultimate conclusion, and these may vary with one another ad libitum. So they do in Juret's volume.

So far as I have noted, no modern book and no modern scholar is mentioned in the entire volume, to express the debt which he owes to Meillet, Kurylowicz, Chantraine, Benveniste, and others. There are also entirely too many misprints, only a few of which have been picked up for the Errata on page 181.

ROLAND G. KENT

La Phonétique Latine. Second edition. Pp. 102. By A.-C. JURET. Paris: Société d'Édition Les Belles Lettres, 1938.
Principes de Métrique Grecque et Latine. Second edition. Pp. 64. By A.-C. JURET. Paris: Société d'Édition Les Belles Lettres, 1938.
Phonétique Grecque. Pp. 122. By A.-C. JURET. Paris: Société d'Édition Les Belles Lettres, 1938.

These brochures form fascicles 4, 5, and 9 of the Série Initiation et Méthodes, of the publications of the Faculty of Letters of the University of Strasbourg.

The first edition of Phonétique Latine was reviewed in LANG. 5.282-4, and what I there said holds true for the second edition, although there have been considerable changes and additions; but the only point there mentioned which has been changed is the interpretation of the personal ending of *stabat*, now happily in more acceptable form (61.2-3). There are some new examples; an occasional old example has been withdrawn; there is an occasional introduction of the (consonantal) ə, without any interpretation of its genetic significance. Some of the old misprints have been corrected, but there are new misprints to replace them. Such a printing as *dīvitis* (38.1) is unfortunate, and the student may be puzzled to meet also the correct *dīvitior* (74.19). *Nuntius* (70.16) and *pōmerium* (74.3) each lack an important macron which is implied by the context, but is not there.

The treatise on Métrique is intended to be used in connection with the other two books, and is therefore largely a descriptive account of

the subject. The first part has to do with the syllable as a unit, and with its quantitative values; with the nature of the 'accent', the structure of cola and of verses. The second part has successive chapters on dactylic verses, anapaestic verses, trochaic and iambic verses, lyric verses and strophes with a fixed number of syllables, the same with a varying number of syllables, and finally rhythm in prose.

Juret, like other French scholars, believes that Latin had no accent of energy, but only a pitch accent, on the accented syllable of the word; that in reading verse, the syllable which we call 'accented' might be marked by a more vigorous note on the accompanying musical instrument, but not with any greater energy of voice. In admitting such a use of the musical accompaniment he seems, to me at least, to yield the point: without the accompaniment, the reader or singer would have to get the corresponding effect by an increase of vocal energy. My view of the Latin accent is however quite different from Juret's, and I must pass on with merely a reference to Sounds of Latin §66.1 (with bibliography in note 2).

The book has its quota of misprint and errors. On page 25, ŏ-crĕ-ās (Aen. 7.630) is measured as two longs, being printed ōcreās; Aen. 3.91 is quoted as beginning Lūminaque, instead of the correct Līminaque; Vergil is said to have 13 hypermetric verses ending in -que, whereas there are 20 such hypermeters, of which 18 end in -que; Aen. 4.629 is quoted without the number of the book, and with a question-mark after nepotesque, instead of a dot or an exclamation point.

The Phonétique Grecque has its subject matter arranged like that of the Latin volume, so that it is rather hard to follow (see LANG. 5.281). In the chapter on the phonemes, Juret regards λ and ρ as 'aspirated' in certain positions, instead of voiceless (6.15 ff.); he regards a vowel bearing the rough breathing as a phoneme distinct from the same vowel with the smooth breathing, instead of regarding the rough breathing as a phoneme [h] (12.4–6). He takes the two syllabic divisions of stop + liquid or nasal as typified by τέκ-κνον and τέκ-νον (16.18); but I should posit the pronunciations τέκ-νον and τέ-κνον. He states that 'ultralong' syllables, that is, syllables naturally long but ending with a consonant, were avoided unless maintained (or recalled) by morphological analogy (18.17–9); but there was no prejudice against such types as ἦστε and πέπεισται. He states that no word ended in more than two consonants (19 fin.), but forgets σάρξ. On the accent, his formulations (25.7–9, 25.23–4) do not account for the impossibility of antepenultimate accent in νομοφύλαξ in the face of κῆρυξ and φοῖνιξ (quite apart from the vowel quantities in the last two words).

In his treatment of the development of the phonemes from pre-Greek, he unnecessarily complicates matters by including or attempting to include all the dialectal developments, and most of those in Modern Greek, as well as by considerable use of the consonantal ə in his formulations, again without any explanation of its significance.   Oftentimes, too, he gives a variation of consonantism, such as πτόλις πόλις (55.9–11), without any elucidation.   Some developments are given which are not generally accepted, and others are explained in an unsatisfactory way: thus original intervocalic *ms* is said to have become *mz*, whence Lesb. Thess. -μμ-, other dialects -μ- with lengthening of the preceding vowel (45 inf.); so also -ns-, -ls-, -rs-.   But passage through a stage -mh- -nh- is much more reasonable, and it is quite uncertain that -rs- -ls- had this development other than by analogy.   He gives the basis of modern πάω as πάγω (52.16); it was really ὑπάγω.   He cites as a development of *tw* a Thessalian -τθ- (59.14-5); but Thess. Πετθαλός is only Φετταλός with metathesis of the aspiration.

That *sw* became -σ- after a consonant, as in ἴσος from *wids-wos (60.8), is wrongly put; for *ts* became -σσ-, shortened anteconsonantal, and then the semivowel was lost.   The account of Greek intervocalic -νσ-, with secondary -σ-, is confusedly put (69 med.), and inaccurate; and his account of -ns- before a consonant (75) is also not developed on chronological principles.   His account of the working of Grassmann's Law (80) is accompanied by examples so briefly set forth as not to be clear.   He thinks that γίγνομαι passed to γίν- through a stage [giɪn-] (81 fin.), though [giŋn-] is a much more reasonable intermediate.   He fails to express with adequate clarity the passage of an intervocalic [h] to the initial vowel (83).   He thinks that the ā's for Attic η's in tragic choruses indicate an old pronunciation still in use in Athens in some conservative circles (93.12-4), and not a deliberate use, for literary purposes, of another Greek dialect form.   Finally (95), he does not appreciate the fact that in later times the pitch accent of ancient Greek was replaced by an accent which contains as its essential element a greater energy, which is what it has been for a number of centuries, and is today.   It seems to be almost impossible for speakers of French to get a real understanding of and feeling for an accent of greater energy.

ROLAND G. KENT

Varro On the Latin Language; with an English translation.   Volume II: Books VIII–X, Fragments.   Pp. 369–676.   By ROLAND G. KENT.

Cambridge: Harvard University Press; London: William Heinemann, 1938.

This volume is a worthy companion of the one reviewed in Language 14.292-300; and so there is no need to describe it, or to state again its merits.

The contents are important for one interested in the history of the early stages of the study of language, but otherwise have slight claims on the attention of a linguist. The subject under discussion, to be sure, is *analogia*; but that is something entirely different from the corollary to phonetic law which the linguist means when he speaks of 'analogy'. Reading of what Varro has to say will, however, serve to show the disadvantages of basing linguistic work on extra-linguistic beliefs,[1] and of starting from meanings instead of forms.

Kent is to be congratulated most heartily on the very successful completion of an arduous task.

G. M. Bolling

Index Criticus Verborum Daretis Phrygii. Pp. vi + 119. By Isabelle Johnson. Nashville: Joint University Libraries, 1938.

This dissertation is an index of Meister's edition (Teubner 1873) employing (so I judge; the author does not say so) the method devised by W. A. Oldfather for the tragedies of Seneca and subsequently applied to Apuleius and to Cicero's Letters. So far as my verification goes (I have read through the word-list and checked a few more than 300 references), the work has been done with admirable care and is in almost all respects reliable. I have found no false citations and no omissions, unless *essent gestae*, which should have been added from the apparatus at ep. 10 as a variant on *gestae essent*, should be counted as one. Mechanical errors are few: parentheses omitted (4), bracket omitted (1), misprints (3)—none serious, ambiguous identifications of forms (3). A little more disturbing are the misconstructions, some, of course, mechanical: In Ep. 15 *De qua re* (the credibility of Homer) *Athenis iudicium fuit, cum pro insano* (variant: *magno*) *haberetur, quod deos cum hominibus belligerasse scripserit, Qua* is not inter. but rel., and *insano* (as well as *magno*) cannot be neu. but must be m. The matter of subst. use of adjectives offers the usual difficulties, but surely *ipsius* Ep. 2 (*inveni historiam Daretis Phrygii ipsius manu scriptam*) is pron., not adj.

The only point, however, on which the author may stand convicted

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[1] In this case philosophy, 'the lamp of Cleanthes'; but psychology is quite as insecure a basis.

of carelessness is the alphabetizing. *Aetas, Anchises, archimachus, com-meatus, conor, coniux, Hecuba, instauro, intellegentia, legitimus, libenter, oportet, pertinax, possum, superior, tumulus,* and *valde* are out of place. Errors of this kind are particularly confusing to users of indexes and careful proof-reading should have eliminated most of them.

About the method in general I have two objections. Whether it is useful to add the total number of occurrences of forms or citations under each article is a disputable point; I find it a nuisance and consider it a waste of an indexer's time. At any rate, an index must contain MS variants to be useful, but the addition of explanatory matter from the apparatus enormously increases the chances of error, adds considerably to the bulk of the work, and is not instructive. What good does *Acamantem* with the first four letters underscored (19,8), or *'Larisa* 14,25 fere omnes libri' do anyone who has not the apparatus before him? An index cannot be expected to take the place of a critical text.

<div align="right">KENNETH M. ABBOTT</div>

EDWARD SAPIR

Edward Sapir died in his fifty-sixth year on February fourth. The heart condition of which he died had been diagnosed about five years before but caused serious trouble for the first time in the summer of 1937 when Sapir was in Ann Arbor teaching in the Linguistic Institute. The enthusiasm and energy which he put into his teaching and scientific discussion and his cordiality in social contact with colleagues and students sapped his strength and brought on a heart attack. During the few previous years while under a doctor's regimen of general quiet and relaxation, his intellectual enthusiasm could not be held within the restraints which his physical condition demanded.

Sapir was born in Lauenberg, Germany, January 26, 1884. When he was only four, his father, Jacob Sapir, migrated to the United States to carry on his profession of cantor. Edward Sapir early showed scholarly ability, musical sense, and literary talent, and won a four-year Pulitzer fellowship for study in Columbia University. He became interested in linguistic science and took a master's degree in Germanic. About this time he came into contact with Franz Boas, dean of American anthropologists and virtually the initiator of strict scientific method in American linguistics. Boas had a profound influence on Sapir, and particularly impressed upon him the need for a broad knowledge of languages of varying structures. He has told us how he came away from a conference with Boas impressed that he had everything to learn about language. For every generalization he had before believed was certain and exceptionless, Boas could summon indubitable contrary examples from American Indian languages he knew. Sapir was also impressed with the possibilities of inductive study of living languages by phonetic recording from native speakers. This led him into the field at least fourteen times to study such languages as Chinook (Wishram dialect), Yana (three dialects), Tlingit, Nootka, Sarcee, Kutchin, Ingalik, Hupa, Navaho, Southern Paiute. In addition, he made use of incidental opportunities to add to his first-hand knowledge of particular languages

whenever he met a speaker of some new language. His work on Jabo of Africa was done with a native, Blooah by name, who was found by some anthropology students working in a bowling alley in Chicago. Typical of his constant desire to observe linguistic phenomena, when a Lithuanian American student once dropped into his office at Yale, he inquired about the inflectional accents and asked him to pronounce words which illustrated the contrasting types. He was then interested to note that the native Lithuanian, though he had not been aware before that there were two different ways of accenting a word, was able to recognize a difference that would hardly have been noticed by a non-native.

He also did a tremendous amount of reading. As a result of his constant interest and study, he probably had a greater knowledge of specific linguistic phenomena than ten or more ordinary linguistic scientists. We have lost this treasury of linguistic knowledge, this accumulation of facts in the mind of one man who was at the same time most competent to draw upon their theoretical significance. But he has shown the way to others, particularly to his students. He has demonstrated the value and the possibility of having a quantity of data as a basis from which to generalize and as a background for the approach to specific problems. Some will say that the faculty of retaining and being able to use so much knowledge belongs only to genius, but Sapir's attitude was that such knowledge can be coordinated under a general understanding of linguistic science. He who has a sound command of linguistic theory can retain a quantity of specific facts to support his theories and to aid him in the constant refinement of his understanding of linguistic phenomena.

Sapir's interests in cultural anthropology and in psychology were completely integrated with his interest in linguistics. He early came to see linguistics as a social science, and social science was to him completely linked with the operations of the personality. He felt that the abstraction of language science from the social setting deprived it of considerable vitality. His own mind was so capable of dialectic thinking, of keeping track of all the various factors in a situation, that he was impatient of those who approached a problem by arbitrarily ruling out consideration of certain factors. He himself set no restrictions on his thinking, but was always ready to bring in new aspects that had heuristic value.

The bibliography given in Psychiatry 1.154–7 (1938) (which does

not include his poems) gives an indication of the breadth of his scholarship.[1] The acuity of his analysis is evident in each of them.

The whole of Sapir's spirit cannot be told in terms of scientific achievement. We must mention too his great belief in human rights. He resented oppression and discrimination against groups and violations of individual justice. As a Jew, he was keenly aware of anti-semitism in American educational institutions and resisted every official action that seemed to involve this issue. But he was not ethnocentric in his sense of social justice and fought equally hard for any individual who was unjustly treated.

Sapir took his doctor's degree in anthropology at Columbia in 1909, was a research assistant at California for a year (1907-8) and held a fellowship and an instructorship at Pennsylvania from 1908 to 1910. He then went to Ottawa to be Chief of the Division of Anthropology of the Geological Survey of Canada and held that position for fifteen years. In 1925 he went to Chicago as Associate Professor of Anthropology and Linguistics. In 1927 he became full Professor. In 1931 he went to Yale as Sterling Professor of Anthropology and Linguistics and as Chair-

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[1] The wide range of his work on American Indian Languages has been summarily indicated above. From the other titles may be selected for special mention here: The Musical Foundations of Verse, JEGPh 20.213-22 (1921); Language, an Introduction to the Study of Speech, New York, 1921; The Grammarian and his Language, Am. Mercury 1.149-55 (1924); Sound Patterns in Language, LANG. 1.37-51 (1925); A Study of Phonetic Symbolism, Journ. Exper. Psych. 12.225-39 (1929); Male and Female Forms of Speech in Yana, Donum Nat. Schrijnen 79-85 (1929); The Status of Linguistics as a Science, LANG. 5.207-14 (1929); Totality, LANG. MONOGR. 6 (1930); The Concept of Phonetic Law as tested in Primitive Languages by Leonard Bloomfield, Methods in Social Science 297-306 (1931); Notes on the Gweabo Language of Liberia, LANG. 7.30-41 (1931); The Function of an International Auxiliary Language, Psyche No. 44.4-15 (1931); The Expression of the Ending-Point Relation in English, French, and German (with Morris Swadesh, edited by Alice V. Morris), LANG. MONOGR. (1931); La Réalité Psychologique des Phonèmes, Journ. de Psych. 30.247-65 (1933); Hittite *hapatiš* 'vassal' and Greek ὀπᾱδος, LANG. 10.274-9 (1934); κύβδα a Karian Gloss, JAOS 56.85 (1936); Internal Linguistic Evidence suggestive of the Northern Origin of the Navaho, Am. Anthrop. n.s. 38.224-35 (1936); Hebrew *'argāz*, a Philistine Word, JAOS 56.272-81 (1936); Greek ἀτύζομαι, a Hittite Loanword, and its Relatives, LANG. 12.175-80 (1936); Tibetan Influences on Tocharian, I, LANG. 12.259-71 (1936); Hebrew 'helmet', a Loanword, and its Bearing on Indo-European Phonology, JAOS 57.73-7 (1937); Glottalized Continuants in Navaho, Nootka, and Kwakiutl (with a note on Indo-European), LANG. 14.248-74 (1938); Nootka Texts (with Morris Swadesh), Special Publications of the Linguistic Society, William Dwight Whitney Linguistic Series (1938).

man of the newly founded Anthropology Department. He was a member, regular or honorary, of a number of anthropological and linguistic societies here and abroad; he was president of the Linguistic Society in 1933, and of the Anthropological Society in 1938. He held several other offices at different times in these societies and served on the committees of research councils, including the National Research Council and the American Indian Committee of the American Council of Learned Societies. Among the special honors conferred in recognition of his achievements were memberships in Sigma Xi, the American Academy of Arts and Sciences, and an honorary degree of Doctor of Science at Columbia.

He leaves a widow, Mrs. Jean McClenaghan Sapir, and five children —Herbert Michael, Helen, Philip, Paul, and David, the first three by a former marriage with Florence Delson, who died in 1924. A host of students, colleagues, and friends also mourn him. We regret the loss to descriptive and comparative linguistics and ethnology, to cultural theory, to social psychology. But more than that, we who are scientists and regard science as a thing of prime value, have it brought home to us at such a time as this how much character is worth. We regret the loss to science but feel poignant sorrow at the passing of a man who was honest and just, who sincerely respected the personal worth of all whom he had dealings with, and who had the human feeling and courage to fight against injustice and discrimination.

MORRIS SWADESH

NOTES AND PERSONALIA

THE LINGUISTIC SOCIETY OF AMERICA will hold its Sixteenth Annual Meeting at Philadelphia, on December 27 and 28, 1939, at the invitation of the University of Pennsylvania.

THE LINGUISTIC INSTITUTE will again be held at the University of Michigan, as part of the Summer Session, June 26 to August 19. Inquiries should be directed to Prof. C. C. Fries, Director of the Linguistic Institute, Angell Hall, University of Michigan, Ann Arbor, Michigan.

THE EXECUTIVE COMMITTEE has reconstituted the Standing Committee on Research, as follows: Chairman, Prof. F. Edgerton, term expiring Feb. 1, 1941; Prof. G. M. Bolling, term expiring Feb. 1, 1942; Prof. L. Bloomfield, term expiring Feb. 1, 1940. The changes are subsequent upon the expiration of Prof. Bolling's term, and the resignation of Prof. E. H. Sturtevant, who had been Chairman.

THE PRESIDENT OF THE SOCIETY has appointed Prof. Kemp Malone, of The Johns Hopkins University, and Prof. Alfred Senn, of the University of Pennsylvania, as delegates to the Fifth International Congress of Linguists, to be held in Brussels August 28 to September 2, 1939, in addition to those previously appointed.

PROF. E. C. ARMSTRONG has asked to be excused from serving as the Society's Delegate to the American Council of Learned Societies, to fill the unexpired term of the late Prof. Eduard Prokosch, and Prof. G. S. Lane, of the University of North Carolina, has been appointed by the Executive Committee of the Society in his place.

PROF. W. F. LUEBKE, of the University of Denver, was appointed to represent the Society at the Seventy-Fifth Anniversary of the Granting of the Charter at the University of Denver, held on March 3 to 5, 1939.

THE HONORARY MEMBER elected at the New York meeting has accepted election. He writes:

Praha, January 18th, 1939: I feel greatly honoured by having been elected Honorary Member of the Linguistic Society of America, and I beg to thank very heartily the Executive Committee of the Society and the Linguistic Society of America for this great honour, which I accept with very great pleasure. Here in Europe we admire the great and important scientific activity of the Linguistic Society of America, and particularly her excellent journal Language, the most representative journal of the American linguists and philologues. I present the best wishes for your Society.—Bedřich Hrozný.

EDWARD SAPIR, a Signer of the Call that led to the foundation of the Linguistic Society of America, and President of the Society in 1933, died in New Haven on February 4, after a long illness. A more adequate notice will appear elsewhere in Language.

EDWIN H. TUTTLE, a Foundation Member of the Society, died in Washington on January 24, 1939. Readers of LANGUAGE and of JAOS will recall his incisive reviews, revealing detailed knowledge of Romance dialects, and of the languages of India, including Dravidian. Biographical data are not available.

SAMUEL KROESCH, Professor of German and Head of the German Department in the University of Minnesota, and a Member of the Linguistic Society of America since 1926, died on October 26, 1938, after an illness of over a year.

He was born in Woolwich, Ontario, on February 10, 1879. The family moved to the United States while he was still very young. He received the A.B. from the University of Missouri in 1903, then taught five years in the Edmond (Okla.) High School. In 1909 he received the Ph.D. degree from the University of Chicago, and in that year went to Whitman College (Walla Walla, Wash.) in the Department of German. In 1916 he went to the University of Minnesota as Assistant Professor of German; he became Associate Professor in 1923, Professor in 1927, Chairman of the Department in 1929.

Courteous and considerate in his dealing with his fellow man, Samuel Kroesch led an active life, though it was frequently interrupted by periods of ill health. His attitude toward those with whom he came

into contact was reserved, yet helpful, and his influence proved for others to be a stimulus to the development of many interests. As a scholar he was painstaking and methodical, producing sure and positive results; as a teacher, uniformly strict and exacting, a bearing which, coupled with sensible and constructive encouragement, brought out the best in his students.

The field of his greatest interest was semantics, the subject in which he began his scholarly work, and with which he was always particularly occupied.

DONALD F. MUNRO

THE FOLLOWING NEW MEMBERS FOR 1939 have been received into the LINGUISTIC SOCIETY OF AMERICA subsequent to the last published list, and up to March 20, 1939:

Mary DeHaven Allen, Mus. B., Yacht Chicago, Wilson Line Pier, Seventh and Water Sts. S.W., Washington, D. C.; *Semitics, Slavic.*

Madison Scott Beeler, Ph.D., Instructor in German, Harvard University; 7 Irving Terrace, Cambridge, Mass.; *Indo-European, Iranian.*

Chauncey J. Blair, A.B., 8 East 96th St., New York City; *Sanskrit.*

Florence Bloch, A.M., Hunter College, Lexington Ave. and 68th St., New York City.

Julio del Toro, A.M., Assistant Professor of Spanish, University of Michigan, Ann Arbor, Mich.

Henry N. Bowman, M.A., Lawrenceville School, Lawrenceville, N. J.; *classics.*

Lawrence Ecker, Ph.D., 1137 South Plymouth Bd., Los Angeles, Calif.; *American Indian langs.*

Gordon H. Fairbanks, M.A., Graduate Assistant in German, University of Wisconsin, Madison, Wis.

Robert A. Fowkes, A.M., Instructor in German, Box 159, New York University, University Heights, New York City; *Indo-European, Celtic.*

Allen H. Fry, Ph.D., Instructor in Sanskrit and Comparative Philology, Catholic University of America; 102 Claremont Place, Garrett Park, Md.; *phonetics.*

William Richard Gaede, Ph.D., Associate Professor of German, Brooklyn College; 1011 East 37th St., Brooklyn, N.Y.

Rosalyn Howard Gardner, M.A., 205 New Grad. Women's Dorm.. Chapel Hill, N. C.; *Romance langs.*

Rev. James A. Geary, Ph.D., Assistant Professor of Celtic Langs. and Literatures, Catholic University of America, Washington, D. C.; *Celtic, Algonquian.*

Jessie May Glenn, Ph.D., Teacher of Latin, High School for Girls; 4745 Leiper Ave., Frankford, Philadelphia, Pa.

Eugene van Tassel Graves, 415 West 118th St., New York City.

Frank Hines, B.A., 1464 41st St., Brooklyn, New York; *Romance linguistics.*

Charles Francis Hockett, M.A., 52 Howe St., New Haven, Conn.; *American Indian linguistics.*

Harry H. Josselson, A.M., Instructor in English, Wayne University; 7621 La Salle Bd., Detroit, Mich.; *Indo-European, Finno-Ugrian.*

Allen B. Kellogg, M.A., Instructor in English, U. S. Hall Coaching School; 512 Stewart Rd., Columbia, Mo.

Herbert O. Lyte, Ph.D., Associate Professor of German, State University of Iowa; Rural Route 3, Iowa City, Iowa.

James B. McMillan, A.M., Assistant Professor of English, School of Commerce, University of Alabama; University, Ala.; *English, American-English.*

Maxwell W. Morton, Ogden Hotel, La Salle Ave., Minneapolis, Minn.; *Egyptian, Coptic.*

Rosamunde M. Preuninger, M.A., Marston Hall, Brown University, Providence, R. I.; *Germanic dialects.*

Charles K. Thomas, Ph.D., Assistant Professor of Public Speaking, Cornell University; Goldwin Smith Hall, Ithaca, N. Y.; *phonetics.*

BOOKS RECEIVED

Under this heading will be acknowledged such works as seem to bear on the advancement of the scientific study of language.

The publicity thus given is regarded as a full return for the presentation of the work. Under no circumstances is it possible to comply with the requests being made by certain publishers for the return of books not reviewed quickly.

Reviews will be published as circumstances permit. Copies of them will be sent to the publishers of the works reviewed.

For further bibliographic information consult the annual list of Exchanges.

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Aegyptus 17. 321–535 (1937); 18. 1–404 (1938).

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Annals of the Bhandarkar Oriental Research Institute 19. 101–312 (1938).

Anthropos 33. 1–745 (1938).

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Bulletin du Cercle Linguistique de Copenhague 1935–1937.

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Castellano, Español, Idioma Nacional. Pp. 196. By AMADO ALONZO. Buenos Aires: Imprenta y Casa Editora Goni, 1938.

The Chinantec. Vol. I: The Chinantec and their Habitat. Pp. 161. By BERNARD BEVAN. Mexico: 1938. (Instituto Panamericano de Geografia e Historia, Publ. 24.)

Chiricahua and Mescalero Apache Texts. Pp. 219. By HARRY
HOIJER. Chicago: University of Chicago Press, 1938.

Contribution à la Grammaire Comparée des Langues du Caucase.
Pp. 137. By JACQUES VAN GINNEKEN. Amsterdam: 1938. (Amst.
Akad. Verh., n.s. 42.)

Description d'un Parler Irlandais de Kerry. Pp. xi + 219. By
M. L. SJOESTEDT-JONVAL. Paris: Édouard Champion, 1938.

Elementos para um Tratado de Fonética Portuguesa. Pp. xxxii
+ 380. By RODRIGO DE SÁ NOGUEIRA. Lisbon: Imprensa Nacional,
1938.

Englische Studien 72. 161–440; 73. 1–160 (1938).

English Studies 20. 95–288; 21. 1–48 (1938–9).

L'Énigme d'Alvão. Pp. vi + 38. By F. BUTAVAND. Paris:
Adrien-Maisonneuve, 1938.

Étude Phonétique des Particules de la Langue Chinoise. Pp. vi
+ 152. By TING-MING TCHEN. Paris: Éditions Héraklès, 1938.

Exploraciones en Oaxaca 1936–7. Pp. 96. By ALFONSO CASO.
Mexico: 1938. (Instituto Panamericano de Geographia e Historia,
Publ. 34.)

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Katholischer Orte des Vogelsberg und der Wetterau. By K. G. BERG-
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—Ahnung und Gegenwart im Werke Eichendorffs. By ERIKA JANSEN.
—Max Dauthendey Mensch und Werk. By W. KRAEMER.—Griech-
ische Religion und Mythologie in der ältesten Literatur der Romer.
By V. NIEBERGALL.—Lebenserscheinungen und Verbreitung des
deutschen Märchens. By K. TÖNGES.

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lese. By J. DIEHL.—Grüninger Namengebung. By W. FAY.—
Heiligenverehrung und Familiennamen in Rheinhessen. By J. FREY.—
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MUS CAOMHÁNACH, RUDOLF HERTZ, VERNAM E. HULL, and GUSTAV
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SANSKRIT ā 'NEAR' IS COGNATE WITH LATIN ā 'FROM'

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There is nothing novel in equating Skt. ā and Lat. ā; the suggestion was made in 1883 independently by Froehde[1] and Johannes Schmidt.[1] Nine years later Von Planta[2] noted that Oscan ā- in *aamanaffed* 'mandavit' strongly supports this view; for, while Lat. ā might result from *abs* before a voiced consonant and Umbrian *aha-, ā-* might come from *ap-* before *t-*, Oscan *s* remains before voiced consonants (*fíísnu, posmom*) and in Oscan inherited *p* before *t* appears as *f* (*scriftas*).

The chief reason why this argument has not finally settled the question is that it does not account for Osc. *ē-* (*eestínt* 'exstant', *eehiianasúm* 'emittendarum'?), which appears to stand in the same relation to Lat. ē as Osc. ā- to Lat. ā. For Osc. ē is necessarily of secondary origin, since original ē appears as *í*. If, then, Osc. *ē-* = Lat. ē must be of secondary origin it seems possible that Osc. *ā-* = Lat. ā may also be of secondary origin, even though the lengthening in these two words must have been quite different from the Latin process and although it is without known parallel in Oscan.[3] Furthermore, the semantic identity of Lat. ā with *ab* and *abs* favors an etymological connection of all three. Consequently many scholars[4] unhesitatingly derive Lat. ā from *abs* in the position before certain voiced consonants.

The distribution of Lat. *ā-*, however, is far different from that of *ē-* and *trā-*, which certainly come from *ex* and *trāns* before voiced consonants; cf. *abdūcō*, but *ēdūcō, trādūcō*; *abluō* but *ēluō*; *abnuō* but *ēnicō, trānō*; *abripiō* but *ēripiō*. For other differences in distribution, see Sommer, Handbuch[2] 298 f. and references. To be sure, an explanation for this situation can be found in the fact that before the simplification of the consonant groups *ps*, *ks*, and *ns* plus voiced consonant, *abs* must have

[1] F. Froehde, BB 7.327; J. Schmidt, KZ 26.42.

[2] Grammatik der oskisch-umbrischen Dialekte 1.209, 210 and fn. 1; cf. 2.454.

[3] So Buck, A Grammar of Oscan and Umbrian 49 paragraph 77.

[4] E.g. Sommer, Handbuch[2] 298; Leumann, Lat. Gramm. 129; Walde-Hofmann, Lat. et. Wörterbuch s.v. *ab*. Ernout and Meillet, Dict. ét. de la langue latine s.v. *ab*, are more cautious.

shared the territory with *ab*, while *ex* and *trāns* had no such rivals; *abdūcō* and *ēdūcō* may represent Ital. *abdoukō* and *egzdoukō* respectively. Nevertheless the lack of correspondence in use between Lat. *ā* and *ē* justifies a suspicion that their origin is not so closely parallel as is usually supposed. At any rate it serves to remind one that in Oscan *ā* and *ē* cannot have the origin commonly assumed for both words in Latin.

As a matter of fact the Oscan data are easily disposed of on Von Planta's theory that Oscan *ā* was inherited. Since Lat. *abs* must be connected with Gk. ἄψ 'back, backwards', it follows that *aps* must have existed in Primitive Italic. This form would regularly yield Primitive Oscan-Umbrian *ass*, just as Primitive Italic *eks* must have yielded *ess*, although neither *ass* nor *ess* is citable from our scanty documents of Oscan and Umbrian. Assuming that *ass* alternated with inherited *ā* somewhat as *abs* and *ā* do in Latin, we get the analogic proportion for Primitive Oscan-Umbrian: *ass* : *ā* = *ess* : *x*. This situation must have induced *ē* at some time after inherited *ē* had changed so far in the direction *i* that it constituted a different phoneme from lengthened *ē* before *ns* (Osc. *keenszstur*). This was certainly the case in Pre-Oscan times and it may also have held in Primitive Oscan-Umbrian.[5] It must not be forgotten, however, that Umbr. *ē-* may be derived from *ek-* before *t*; it is only in Oscan that the analogical origin is required.

Hence we must assume a Primitive Italic preposition and preverb *ā* 'from', and it is extremely probable that Lat. *ā* is at least partly traceable to it. One must also admit that Primitive Italic *aps* before certain consonants would yield Lat. *ā*; the Latin preposition and preverb may have a composite origin.

While Indo-Iranian *ā* shows a much wider range of meaning than Latin *ā*, there is one clear point of semantic identity; both in Indo-Iranian and in Latin *ā* with the ablative means 'from, away from'. In Indo-Iranian, however, *ā* with the locative means 'in, at, on' and with the accusative 'to, toward' or 'near'. It is therefore plausible to suppose that in Primitive Indo-European there was a situation similar to that presented in Greek by παρά, which means with the genitive 'from beside, from', with the dative 'beside', and with the accusative either 'to the side of' or 'beside, near'.[6] That is, IE *ā* seems to have meant something like 'near', and the proper force of the accompanying case determined

[5] Cf. Buck, Gramm. 33 paragraph 40.

[6] It is generally recognized that in Indo-European the cases normally retain their full meaning even when accompanied by local adverbs. This historic example is chosen merely for convenience.

the more precise meaning of the phrase as a whole. If so the Latin usage represents a secondary restriction of use. Apparently the Sanskrit restriction of the preverb *ā* to the meanings 'hither' and 'toward' is also secondary.

If it had not been for the internal Italic difficulties, that seem at last to have been disposed of, probably all scholars would have identified Skt. *ā* with Lat. *ā*. But since this etymology has been considered impossible there have been other suggestions.

One of these, namely Hirt's[7] connection of Skt. *ā* with Gk. ἀνά 'up, on, upon' and ἄνω 'above, upward' has no semantic probability.

Much more plausible is the comparison of various compounds containing IE *ĕ*- or *ŏ*-. Since the material is collected in Walde-Pokorny s.v. *ĕ*, it will be enough here to cite several of the clearest instances. The best evidence for prefixed *ē*- is presented by West Germanic, e.g. OHG *āmaht* 'Ohnmacht', *āmād* 'aftermath', *āteilo* 'expers', OE *ǣwǣde* 'unclothed'. Homeric ἠβαιός = βαιός 'little, small' may be another example. The other words to which the prefix *ē*- has been ascribed scarcely strengthen the case. IE *ō*- appears in Gk. ὠρύομαι 'howl' : Skt. *rauti*, *ruváti* 'cry', ὠφελέω 'help' beside ὄφελος 'profit' : Skt. *phálam* 'fruit, result, profit', ὠκεανος 'ocean' : κεῖμαι. More frequent are the traces of IE *o*-: e.g., Gk., ὄτριχες 'with like hair'; ὄπατρος 'by the same father'; ὄζυγες = ὁμόζυγες; ὄζος, Goth. *asts* 'bough' < IE *o-zdos* (: *sed-* 'sit');[8] ὀκέλλω 'run (a ship) aground' = κέλλω; ὀτρύνω 'arouse, spur on' : Skt. *tvarate* 'hastens'. IE *e*- is probably to be recognized in Gk. ἐθέλω = θέλω 'wish'.

Brugmann[9] compared the variation in quantity in the prefix *ĕ*-, *ŏ*- with that of IE *nĕ* 'not', *mĕ* 'me', and *prŏ* 'forth'. The laryngeal theory has now provided us with an explanation for these and other variations in the quantity of a final vowel. In case an immediately following word in the same phrase began with a laryngeal plus a consonant the vowel was lengthened upon the loss of the laryngeal.[10] Just as Skt. *āsan* 'non-existent', IE *n̥-sént-*, implies IH *'n̥-'sent-*, so Homeric ἦεν, Skt. *āsan* 'they were', IE *ē-sent* implies IH *'e-'sent*. But on the other hand IE *n̥-* 'not' before a non-laryngeal initial appears as in Skt. *ajñātas*, Gk. ἄγνωτος, etc., and in general the augment of Sanskrit and Greek is a short vowel.

[7] Der indogermanische Ablaut 92; rejected by Brugmann, Album Kern 29.
[8] See below p. 150-1 f.
[9] Album Kern 29.
[10] See especially Kurylowicz, Études indoeuropéennes 30-3.

Similarly the Indo-European alternation of *e*- and *o*- with *ē*- and *ō*-
in our prefix implies an Indo-Hittite alternation between compounds
whose second member began with a non-laryngeal or a laryngeal plus
a vowel and others whose second member began with a laryngeal
plus a consonant. After the loss of the laryngeals the resulting alter-
nation of long and short vowel in the prior member of the compounds
had no correlation with any phonetic feature of the posterior member,
and so one form or the other of the prefix could easily be extended
beyond its proper sphere. Consequently we must not too confidently
extract evidence from the forms of the historic languages as to the
former existence of an initial laryngeal in particular stems.

If we explain the long vowel of Skt. *ā* and of such European words
as Gk. ὠκέανος and OHG *āmaht* by the assumption of a lost laryngeal,
we have ready to hand an adequate explanation of the vowel quality
of Lat. *ā* beside IE *ĕ*, *ŏ*; IE *ā* represents IH *Ea-A*[11] plus consonant. Here
again one must expect much displacement of the original distribution
of the several forms of the adverb, and it is evident that in Italic both
IE *ĕ* and IE *ŏ* have been entirely eliminated. Nevertheless it may be
noted that one of the few Latin verbs compounded with *ā*- clearly
possessed initial *A* in Indo-Hittite. The second member of Lat. *ā*-
moveō is to be compared with Gk. ἀμείομαι 'surpass, outstrip' and
ἀμύνω 'ward off'. It may be argued that *a* in the former word proves
nothing, since the full grade of the second syllable indicates reduced
grade of the first syllable and *ƅ* would yield Gk. *a* after any laryngeal;
but ἀμύνω < *ἀμυν-yω implies IH *Aámu*-.[12]

It is clear that the IH compound (or phrase) *Ea-Ameu*- would appear
as Gk. *ἀμείομαι, Att.-Ion. *ἠμείομαι. While this word is not citable
there are, I think, a few forms that are closely parallel to it. In other
words, we must recognize IE *ā*- in Greek.

In Homer the verb ἀμάω 'reap' usually has initial *ā* unless a preverb
immediately precedes (e.g. διάμησε, Il. 3.359). Wilhelm Schulze[13]
read in such passages ἀμμάω < *ἀπ-μάω, an assumed variant of ἀπαμάω.

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[11] I use Sapir's notation for the laryngeals with a few elaborations of my own:
' = the glottal stop of palatal color; ! = the glottal stop of *a*-color; *x* = the post
velar (*a*-colored) voiceless spirant; γ = the post velar voiced spirant; *A* = any
laryngeal; *A* = either *a*-colored laryngeal (! or *x*); *E* = either *e*-colored laryngeal
(' or γ); *H* = either laryngeal that is preserved in Hittite (*x* or γ); *?* = either
glottal stop (' or !).

[12] If one connects Hitt. *mauss*-, *mus*- 'fall', as I did in HG 103 f., one must either
write IH *!ámu*-; or assume that IH *x* was lost in Hittite before *m*.

[13] Quaestiones Epicae 365 fn. 3.

Friedrich Bechtel[14] disposed of ἀμῷεν (Od. 9.135) by reading uncontracted ἀμάοιεν, and he labelled ἀμήσαντες (Il. 24.451, Od. 21.301) 'metrical lengthening'. He says nothing about ἀμητῆρες 'harvesters' (Il. 11.67) and ἄμητος 'harvest' (Il. 19.223). It seems probable that we have here Gk. ἀ- = Lat. *ā*- < IE *ā*- (with Epic *ā* instead of *η* because Ionic, like Attic, possessed only the uncompounded ἀμάω). The 'prothetic' vowel of ἀμάω is, as usual, evidence for an Indo-Hittite laryngeal; for that language we must assume uncompounded *Aъm-*[15] beside the compound *Ea-Am-*.

Homeric ἀείδω 'sing' usually has a short initial vowel, but in Od. 17.519 the *a* is long. The passage is:

ὡς δ' ὅτ' ἀοιδὸν ἀνὴρ ποτιδέρκεται, ὅς τε θεῶν ἐξ

ἀείδῃ δεδαὼς ἔπε' ἱμερόεντα βροτοῖσιν,

Here the postposition ἐξ merely reenforces the idea already expressed by the preverb ἀ-. In the later poets the form with long *a* is used as equivalent to the form with short *a*; but its occurrence shows that the one Homeric example is genuine. An *a*-colored laryngeal was already clear for this root on account of αὐδή 'voice'.[16]

Attic Ionic ἀήρ, ἠέρος 'mist, haze; air' retains original *ā* in the nom. by dissimilation against the *η* of the second syllable, but no previous explanation of the length of the initial vowel (cf. ἄημι with ἀ) has come to my attention. I suggest that the primary meaning of ἀήρ was 'exhalatio' (IH *Ea-xwe'-*, whose second and third laryngeal are determined in part by Hitt. *huwant-* 'wind').

Gk. ἠίθεος 'unmarried man' is always connected with Skt. *vidhávā* 'widow' and Lat. *viduus* 'bereft of wife or husband'. Boisacq explains the prefixed *η*- as rhythmic lengthening of a 'prothetic' *ε*-. Whether the non-Attic-Ionic form of this word had initial *ā* or *η* is not altogether certain. ᾱθεος in the papyrus manuscript of Cercidas 9.11 may be a hyperdoric form like Ζᾱνός (1.7), and so may ἀιθέων in line 4 of the paean, POxy. 4.660. On the other hand ἠίθεοι in a papyrus text of Sappho (POxy. 10.1232.2.1.18 = *β* 2.1.18 Lobel), may be an epic form, since it occurs in a poem of Lobel's second class (p. xxvi). If we assume general Gk. ἀ-(ϝ)ιθε(ϝ)ος, the word was originally semantically similar to Lat. *dīviduus* 'divided, separated', and we must probably conclude

[14] Lexilogus zu Homer 36.

[15] As to the vowel of the second syllable, I assume IH and IE -*ē*- on account of OE *māwan*, OHG *māen*, so that the Greek word originally, at least, went like ξῆν; but that is aside from our present point. See below, p. 153. fn. 29.

[16] Kurylowicz, Symb. Gramm. in Honorem Rozwadowski 97.

that the Indo-Hittite word for 'unmarried' was, without the prefix, *Awidhéwos*. If, on the other hand, we assume general Gk. *ἠ-(ϝ)ίθε(ϝ)ος*, the word is to be grouped with OHG *āmaht*, etc., and the Indo-Hittite is to be reconstructed as *Ewidhéwos*. In the latter case we cannot assign any definite meaning to the prefix in Greek, since it is only IE *ā* that is known anywhere to have eliminated the other original varieties of meaning and to have kept only the meaning 'from'.

Since the Indo-European languages show all three vowel qualities (*ĕ*, *ŏ*, and *ā*) in our particle we are compelled to assume that in Indo-Hittite its initial laryngeal was one of the two (*E* = ' or *γ*) which had no effect upon vowel quality; when IE *ā* appears it must be ascribed to an initial laryngeal of the next word.[17]

In the present state of our knowledge it is only Hittite that can distinguish between ' and *γ*.[18] For IH ' is lost (or at least not written in our customary transliteration) in Hittite, while IH *γ* appears as Hitt. *ḫ* (always written singly).   I have held[19] that in a number of Hitt. words initial *ḫa*- corresponds to the IE prefix *o*-, but few if any have been convinced, and certainly a part of the evidence previously cited must be discarded.   It is perfectly clear that *ha*- was not a living prefix in Hittite at the time when our texts were composed; but only a detailed discussion can determine whether or not Hittite contains some fossilized survivals more or less like those that have been discovered in Greek.

ᴳᴵˢ*hasdwer* (*ḫa-aš-du-e-ir*, *ḫa-aš-du-ir*).   As I have elsewhere shown[20] the contexts in which this word occurs require a meaning 'twigs, branches', or the like.   The only other possibility is the one suggested by Eheolf,[21] namely 'leaves', and the determinative GIŠ 'wood' does not favor that meaning.

[17] Under these circumstances *a* is possible only with long quantity in Primitive Indo-European; IH *EaAC* > IE *āC*, IH *EaAa* > IE *ā*, IH *EaA̯ъ* > IE *ā*, IH *EaAo* > IE *ā*.

[18] Some scholars, to be sure, think that *γ* converted a contiguous *e* to *o*, and, if so, Greek, Latin, and Celtic could furnish evidence.   But I have argued against this opinion in Lang. 14.104–11.   I take this opportunity to point out one additional bit of evidence that *ŏ* may stand in ablaut relation to full-grade *ā̆*, or, more precisely, that while IH *x* converted a contiguous *e* to *a* it did not alter the quality of a contiguous *o*.   The Hittite 1 sg. medio-passive ending -*ahhari* cannot be separated from Lat. -*ōr*, but Hitt. -*hh*- stands for IH -*x*-.   Hence Lat. -*ō*- comes from IH -*o*- contiguous to -*x*-, an *a*-colored laryngeal.

[19] Lang. 4.163–5, 6.218, HG 146, 213.—The abbreviations in the remainder of this paper follow the usage in my Hittite Glossary, Ed. 2.

[20] Chrest. 123.   Cf. Couvreur, Hett. *Ḫ* 147.

[21] Ap. Couvreur, loc. cit.

I have connected the word with IE *o-sd-os* (Gk. ὄζος, Goth. *asts*) 'branch, twig'. Brugmann[22] supposed that the etymological meaning of this word was 'Ansatz, ansitzender Stamm', but M. Bloomfield[22] noted the evident connection with IE *ni-sd-os* 'nest' and concluded that it meant 'place to sit on, perch', just as **nisdos* means 'place to sit in'. He continues: 'Both ... owe their being to sympathetic observation of bird life, almost idyllic in mood.' A much more plausible supposition is that nesting and perching had practical importance for augury. That the manner in which birds perched was significant for Greek augury, we learn from Aristotle, Hist. Anim. 608 b 28 f.: ὅθεν καὶ τὰς διεδρείας καὶ τὰς συνεδρείας οἱ μάντεις λαμβάνουσι, δίεδρα μὲν τὰ πολέμια τιθέντες, σύνεδρα δὲ τὰ εἰρηνοῦντα πρὸς ἄλληλα, 'whence the diviners interpret perching apart or together, assuming that the hostile <birds> perched apart while those that are at peace with one another perch together'.

This gives us a hint on the suffix and the primary meaning of Hitt. *hastwer*; it was originally, no doubt, similar in meaning to Gk. συνεδρία, and the suffix must be the familiar *-wer/n-*[23] that forms verbal nouns in various Indo-European languages (e.g. Cyprian δοϝεναι = Vedic *dāváne*). If I was correct in concluding[24] that IH *er* appears in Hittite as *ar*, then Hitt. *-wer* must represent IH *-wēr*; lengthened grade in the nom.-acc. of *r/n*-stems is familiar in Gk. ὕδωρ and σκώρ, and it is likely that Lat. *iter* and *über* have shortened their final syllable in the same way as *agŏr* from **agōr*. The suffix *-wer/n-* is common in Hittite, where verbal nouns in *-war* (gen. *-was* is analogical; see HG 153) are freely formed except from verb-stems in *-u-*, which require *-mar* instead. It is perhaps significant that we seem to have the genitive of such a verbal noun from a stem *hast-* in KUB 25.22.3.1: ᴰU *ḫa-aš-tu-u-wa-aš* ᴰKAL *ḫa-aš-tu-u-[w]a-aš*. I can find nothing in the fragmentary context to fix the meaning of this epithet; but it is at least possible that it means something like 'of <the omen of> alighting'. At any rate, while IH γo-sd-os meant 'something to sit on', IH γo-sd-wēr seems originally to have meant 'a sitting upon, a perching'. This abstract meaning easily developed into the collective meaning of Hitt. *hastwer* 'branches'.

We may say with some confidence that in *hasdwer* 'branches' Hittite preserves one word containing the Indo-Hittite prefix γo-.

[22] Brugmann, IF 19.379 fn. 1, Grundr. 2².2.816; Bloomfield, LANG. 3.213 f.

[23] On this suffix, see most recently Benveniste, Origines de la formation des noms en indo-européen 1.110-6.

[24] HG 90 f.

hanna- (*ḫa-an-na-a-i*, pl. *ḫa-an-na-an-zi*, midd. *ḫa-an-na-ri*) 'litigate, decide a law suit'. It is improbable that such juridical meanings are primary. Latin *līs* means 'quarrel' as well as 'law suit' and the more general meaning is probably the earlier. Gk. δίκη 'law suit' contains the root *deiḱ-* 'show'. This consideration lends particular significance to the one known passage where Hitt. *hanna-* cannot mean either 'litigate' or 'decide a law suit'.

KUB 12.26.2.1–7:[25] ᴰUTU-*uš-wa* ᴰ*Kam-ru-ši-pa-aš-ša* UDU.ḪI.A *ki-iš-kán-zi* (2) *nu-wa-ra-at-za-kán ḫa-an-na-<an->ta-ti nu-wa-ra-at-za-kán* (3) *ša-a-an-ta-ti nu-wa-za* ᴰ*Kam-ru-ši-pa-aš* ŠA AN.BARᴳᴵˢ GU.ZA (4) *da-a-iš nu-wa-aš-ša-an* A.BÁR ᴳᴵˢGA.ZUM SÍG (5) *da-a-iš nu-wa-kán šu-up-pí-in* ÁŠ.SAL.GÀR-*an* (6) *ki-iš-ši-ir nu-wa-ra-an pí-iš-ši-ir* (7) *nu-wa-ra-an-kán ar-ri-ir*. 'The sun god and Kamrusepas are combing sheep. They divided(?) them between themselves, and they quarreled with each other. Kamrusepas placed an iron chair, and put a wool-comb of *abaru* upon it. They combed a clean young ewe; and they threw it down and washed it.' The meaning 'distribute, divide' here suggested for *hanna-* harmonizes with the middle voice and the use of the reflexive enclitic *-za*, and apparently also with the context as a whole. The corresponding active meaning would be 'assign to' or the like, and from this the shift is particularly easy to the juridical meaning 'adjudicate'.

The meaning 'assign to' also harmonizes with the etymology from IH γ*o-nei-* 'lead near' or the like, which I have previously suggested. There are, of course two formal difficulties: the assumed compound is always written with double *-nn-*, and *hanna-* differs in conjugation from *nai-* 'lead, drive'. Both of these difficulties, however, are involved also in *penna-* 'drive away',[26] *unna-* 'drive hither', and *nanna-* 'drive', which everyone connects with *nai-*. Götze, MS 63 f., suggests that the compounds contain the suffix *-na-*, so that the first *-n-* is all that remains of the verbal root. This point need not be discussed here; in any case, *ha-nna-* seems to be parallel to *pe-nna-* and *u-nna-*.[27]

This gives us a second very probable survival of IH γ*o-* in Hittite.

[25] Discussed and partially translated by Goetze, Tunn. 88.

[26] I am now in full agreement with Friedrich, ZA NF 2.52 f., Vert. 2.146, about the meaning of the inseparable prefix *pe-*; but the separable prefix must be sharply distinguished from it. Cf. Bechtel, *-sk-* 96–8.

[27] Pedersen's suggestion, Hitt. 201, that *hanna-* contains the root of γιγνώσκω and MHG *erkennen* involves the assumption that IE (or IH) *ky*, *gy*, *ghy* became Hitt. *ḫ*. Of this change I am not convinced; and in any case the parallelism with *penna-*, *unna-*, *nanna-* can scarcely be accidental.

handas (*ḫa-an-da-aš*, *ḫa-an-ta-aš*) 'firm, true'. My former suggestion that the word is connected with Lat. *nōdus* 'knot', Goth. *nati* 'net', etc. would imply an IH γ*o-nd-os* 'tied together, tied fast' or the like. It still seems to me that the etymology is possible; but it is far from certain.

hamesha- (gen. *ḫa-me-eš-ḫa-aš*, dat. *ḫa-mi-iš-ḫi*), *hameshanza* (*ḫa-me-eš-ḫa-an-za*, *ḫa-me-iš-ḫa-an-za*) 'spring, spring and summer'.[28] The connection with Gk. ἀμάω, etc. (see above p. 148–9), seems reasonably certain; but it is equally possible to connect it with the form in *ă*- or with the form in *ā*-. In the former case we must assume IH *xъm*-, since Hittite initial *ha*- must, in view of Gk. ἀμάω, be the *a*-colored laryngeal that yields Hitt. *h*-. In the latter case we must assume IH γ*o-ꭨm*-, since, if Hitt. *ha*- is a prefix, the initial laryngeal of the root must be the *a*-colored laryngeal that disappears in Hittite. Since the meaning of the Hittite words does not require the prefix, it is simpler not to assume it and to reconstruct the IH verb as *xъmeE*-.[29]

hannas (*ḫa-an-na-aš*) 'grandmother'. The connection of this word with Hitt. *annas* 'mother' is extremely probable, and there is no internal difficulty in assuming a prefix more or less as in Lat. *proavus* 'great-grandfather', *abavus* 'great-great-grandfather', etc. This can be true, however, only if we suppose that the Indo-Hittite word which gave rise to IE *mātēr* was supplanted in Hittite by the word for 'old woman' before the prefix γ*e/o*- ceased to be productive.[30] It seems more probable that Hitt. *hannas* is to be equated with Lat. *anus*, OHG *anō*, etc. on the basis of IH *xános* or *xъnós* 'old woman'. Presumably this word came to be used in Pre-Hittite both in the sense of 'grandmother' and in the sense of 'mother'; but in the latter force it was frequently coupled with *attas* 'father' and suffered assimilative loss of the initial consonant.

In *hannas*, therefore, we probably should not assume a prefix.

The other words in which I have sought for a Hittite prefix cognate with Indo-European *o*- had better be disposed of otherwise.[31]

[28] See now von Brandenstein, Orientalia 8.68–81.

[29] The Hittite word confirms our conclusion (p. 149 fn. 15) that the Indo-European vowel of the second syllable was -*ē*-. Its length must be due to a laryngeal (*E*); and one may suspect that we have this in the Hittite -*sh*-. If so IH -γ*s* became Hitt. -*sh*-, and some other instances of the apparent suffix -*sha*- (Götze, KlF 1.178 f.; HG 160) may have arisen in this way.

[30] In this case Hitt. *annas*, Lat. *anus*, etc. must come from IH ꭨ*ános* or ꭨъ*nós* and Hitt. *hannas* from IH *xa-ꭨnos*. The alternative preferred in the text was suggested by W. Petersen, AOr. 9.203.

[31] Hitt. *handais* 'heat' must be separated from *a-a-an-za* [ayants] 'hot', on which see Sturtevant, LANG. 14.70. For *happer* 'price', see Sapir, LANG. 12.179;

We have, then, two Hittite words that very probably contain *ha-*
from the IH prefix γο, and there are several other words in which it may
possibly occur.   It is probable that the Indo-Hittite source of IE *ĕ-*, *ŏ-*,
ā 'near' should be reconstructed to IH γ*e/o*, with a variant γ*a/o* before
an initial *A* in the next word.

Sturtevant, LANG. 14.108 f.   Hitt. *harp-* means 'join', not 'place, lay', as I sup-
posed when I wrote LANG. 4.164.   For *hapatis*, cf. Sapir, LANG. 10.274–9; what-
ever one may think of his attempt to connect the Hittite word with Gk. ὀπηδός as
loans from a Semitic source, his strictures upon my connection of them as cognates
are sound.   For *hatk-* 'close', see Benveniste, Origines de la formation des noms
en indo-européen 1.156.   For *huwai-* 'flee, run', see Couvreur, Hett. Ḫ 119 f.

THE VOICE OF THE INDO-EUROPEAN PERFECT

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When you first learn Greek, you are naturally surprised when you come to the principal parts of γίγνομαι and find γενήσομαι, ἐγενόμην and then apparently a perfect active: γέγονα, and finally γεγένημαι. This paper has to do with the true interpretation of this phenomenon and similar anomalies which occur in Indo-Iranian and also, in one or two isolated instances, in Latin.

Several modern studies of the perfect tense, especially those of Wackernagel,[1] Renou,[2] and Chantraine,[3] along with various acute observations of Meillet's in a series of articles in the Bulletin de la Société de Linguistique de Paris,[4] have led to the conclusion that the traditional picture of the perfect, active and middle, as we have it in Greek and Sanskrit, does not reflect original conditions. It seems clear: (1) that the parent speech had no perfect middle of the type δέδομαι; (2) that the so-called perfect active is frequently associated in Vedic Sanskrit, and still more often in Greek, with verbs otherwise middle (in Latin also the 'active' perfect reverti belongs with the present middle, revertor, and memini with reminiscor); (3) that semantically this older, inherited perfect expresses the state in which the subject finds itself as a result of previous action, rather than a completed action, is intransitive, rather than transitive. The so-called 'resultative' perfect, that is, the perfect which expresses the continuing effect of the action on the object, is historically a later development.

A striking illustration of the way in which the perfect active normally associates itself with the middle voice of other tenses of the same verb occurs, for example, in Vedic prose for the group á vṛt-, corresponding to Latin revertor, reverti:

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[1] J. Wackernagel, Studien zum griechischen Perfektum, Göttingen, 1904.

[2] L. Renou, La valeur du parfait dans les hymnes védiques (Société de Linguistique de Paris, Collection linguistique, 18), Paris, 1925.

[3] P. Chantraine, Histoire du parfait grec (Collection linguistique, 21), Paris, 1927.

[4] See especially BSL 23.64–75; 24.189–94 (cf. Renou, ibid., 185–88); 25.95–97; cf. MSL 23.215–21 (1935).

ÇB. III 2.4.6. *sắ devắn upắvavarta sắ vaí sắ tán mógham upắvavarta*
'(Vāk) retourna vers les dieux, mais en fait elle y retourna en vain',
which is taken up (22) by the imperfect middle:

*yáthā ... sắ devắn upắvartataivám evaínām etad yájamāno ví hvayate
sắ yájamānam upắvartate* 'quand elle retourna vers les dieux, alors le
sacrifiant l'appelle, elle retourne vers le sacrifiant'.[5]

The proofs that the perfect middle of Greek and Indo-Iranian is a
later development of those languages, not an inherited category, are
discussed by Hirt[6] and conveniently summarized also by Sturtevant.[7]
Meillet, indeed, seems inclined to go further and consider not only the
development of a perfect middle, but the whole distinction of meaning
between active and middle endings as in notable part dialectal.[8]   In
suggesting this idea Meillet seems to me to write with somewhat less
than his usual caution, since in the third persons, at least, we have
evidence of a fairly clear distinction of meaning between active and
middle endings not only in Greek and Indo-Iranian, but also in
Armenian, Phrygian, Italic, Venetic, Germanic, Celtic, Tocharian, and
Hittite,[9] so that it can hardly be called a secondary, dialectical
development.

In two recent studies, new light has been brought to our problem.
In 1932 Kurylowicz,[10] starting from the contrast between the active
endings of the present-aorist system, *-m, -s, -t*, and those of the perfect
called 'active', *-a, -tha, -e* (seen in Greek οἶδα, οἶσθα, οἶδε), shows a
relationship between the latter endings and what he considers the
oldest middle endings.   The second singular perfect ending, *-tha*, he
connects with the second singular secondary middle ending *-thās* of
Sanskrit.   This seems more ancient than Iranian *-sa*, Greek *-σο*, which
may be easily accounted for by the proportion *-t* : *-s* as *-to* : x.   The

[5] The Çatapatha-Brâhmaṇa, edited by Dr. Albrecht Weber, 244 and 246 (Berlin,
London, 1855).   This passage is cited by Renou (Valeur du parfait, 143–44).

Cf. also Meillet, BSL 23.67–68, for an illuminating collocation of perfect
actives, associated with middle forms, in widely scattered types of Indo-
European.

[6] Indog. Gram. 4.266–68 (1928).

[7] LANG. 10.12–13 (1924).

[8] Cf. BSL 23.66.

[9] Cf. E. F. Claflin, LANG. 14.4–6, with footnotes 25–35; AJP 48.171–75 (though
these discussions concern primarily the middle ending *-r*, they apply equally to
the morphemes *-to* and *-nto*, with which the *r*-ending is most commonly blended).
For Venetic, cf. my remarks on *zonasto, zoto*, and *vhaχ·s·θo* (LANG. 12.29–30) and
for Germanic, AJP 48.159, with ftn. 11.

[10] Les désinences moyennes de l'indo-européen et du hittite, BSL 33.1–4 (1932).

perfect ending -*e* of the third singular finds an exact parallel, according to Kurylowicz, in the middle ending -*a*, preserved in certain old Vedic preterites, such as *aduha*. The -*a* of the first person of the perfect he connects with the ending -*ai* (Sanskrit -*e*), which is the first singular ending not only of the Indo-Iranian perfect middle, but also of the present middle. Kurylowicz's conclusion is that the endings of the perfect are the prototype of at least the secondary middle endings of Indo-European, which represent a transformation of the endings preserved in the archaic state in the perfect, a transformation due to the influence of the endings of the active (the introduction of -*m*, -*s*, -*t*).

In the very same year another scholar, working entirely independently, the Norwegian linguist, Stang,[11] came to strikingly similar conclusions. Starting with the acceptance of Meillet's theory[12] that the typical secondary middle endings -*so/e*, -*to/e*, -*nto/e* represent simply the full grade of the zero-grade active endings -*s*, -*t*, -*nt*, Stang develops the hypothesis that what he calls the 'perfect diathesis' once existed in the present-aorist system also, and argues that the Indo-European middle had its origin in the union of these middle endings with those of the prehistoric perfect. In developing this idea Stang lays considerable stress, and with good reason, it seems to me, on the semantic resemblance between middle and perfect.

Both Stang and Kurylowicz connect the perfect endings with the middle endings of Hittite, -*ha*, -*tati*, -*a* (beside -*ta*); and both view the third plural active perfect ending seen in Sanskrit *vidúr* (*vidúḥ*) and Latin *dīxēre*, for example, as related to the various types of middle endings characterized by *r*.[13] This makes a fourth ending common to the perfect and the middle.

In commenting on the 'monogenesis' of the element -*r* of conjugation, thus established, Kurylowicz remarks[14] that 'on fait provisoirement abstraction de la question de la parenté de la forme impersonnelle italique **ferar*, v.-irl. *berar* avec les formes en *r* du parfait et du moyen'. Since I have showed[15] that the ending of Umbrian *ferar*, Irish *berar* is an inherited middle ending, there is no need to 'faire abstraction' of it.

Since space does not permit a detailed criticism of the already-

[11] Chr. S. Stang, Perfektum und Medium, Norsk Tidsskrift 6.29–39 (Oslo, 1932).
[12] Cf. BSL 23.70; MSL 23.217.
[13] So also J. Alexander Kerns and Benjamin Schwartz, LANG. 13.269 (1937).
[14] BSL 33.4.
[15] The Indo-European middle ending -*r*, LANG. 14.1–9, esp. 4–6; cf. also The hypothesis of the Italo-Celtic impersonal passive in -*r*, LANG. 5.232–50, esp. 233, ftn. 8.

mentioned theories of Meillet, Kurylowicz, and Stang, I shall briefly indicate what seems to me to be perhaps the most simple and unforced interpretation of the facts. The so-called perfect active was in reality an old middle, existing side by side with the -so, -to, -nto middle. Just as there is more than one kind of present and aorist, so there may have been more than one kind of middle. The reason why I prefer this hypothesis to the supposition of Kurylowicz that the Indo-European perfect was the prototype of the secondary middle endings is as follows: Since there is clear evidence of the existence of the morphemes -tor and -ntor in both Hittite and Indo-European, with a well-developed medio-passive idea attached to them,[16] a rigorous use of the comparative method puts them into Indo-Hittite, in this sense. Possibly they may be derived from a Pre-Indo-Hittite perfect; but at present the Pre-Indo-Hittite period seems too misty to throw much light on our problem. Kurylowicz's idea that the development of the secondary middle endings was due to the influence of the active (introduction of -m, -s, -t) is certainly very suggestive and may be right.

Meillet says[17] that the only thing that really characterizes the perfect is its peculiar endings, and these endings show an unmistakable affinity to the oldest middle endings. If, on the other hand, we agree with Renou[18] that the true definition of the perfect is of semantic order, then the semantic character of the perfect shows an equally definite affinity with the middle voice. For it expresses, not so much an action, as the state in which the subject finds itself as the result of an action.

There was apparently only one perfect in Indo-European, without distinction of voice. But that does not mean that the perfect was indifferent to voice. As Delbrück says,[19] we get the clearest idea of the original force of voice from the Aktiva tantum and the Media tantum. The later, form-for-form opposition of active and middle tended to sharpen the distinction and somewhat to obscure the original meaning.

So I conceive of the IE perfect as practically a Medium tantum, having the characteristic nuance of interest of the subject in the action.

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[16] Cf. A. W. M. Odé, De uitgangen met R van het deponens en het passivum in de indoeuropeesche talen 3–31 (Haarlem, 1924); for Hittite, also E. H. Sturtevant, Comparative grammar of the Hittite language 265, §428; 266, §432 (Philadelphia, 1933).

[17] BSL 23.67; 25.95, 96.

[18] Valeur du parfait 1.

[19] Brugmann, Grundriss[1] 4.415.

The fact that, as Hirt says,[20] a perfect middle could not develop until the perfect active, so-called, had somewhat lost its original sense, seems to indicate that the original sense was middle.   From the point of view of descriptive grammar this may be inconvenient, since we should have the old perfect, middle in character, and the new perfect middle.   But that does not affect the scientific fact.

If this conclusion seems too radical, I would appeal to Dionysius Thrax, no mean authority on a point of grammar.   In view of the persistence in the usage of modern scholars of the term perfect active for the tense that we have been discussing, it is rather surprising to find that Dionysius in his discussion of the voices, or, as he calls them, the diatheses, of the Greek verb gives as examples of the middle voice without any question two perfect 'actives': πέπηγα and διέφθορα. Dionysius says:

Διαθέσεις εἰσὶ τρεῖς, ἐνέργεια, πάθος, μεσότης· ἐνέργεια μὲν οἷον τύπτω, πάθος δὲ οἷον τύπτομαι, μεσότης δὲ ἡ ποτὲ μὲν ἐνέργειαν ποτὲ δὲ πάθος παριστᾶσα, οἷον πέπηγα διέφθορα ἐποιησάμην ἐγραψάμην.[21]

[20] Indog. Gram. 4.268: 'Das Perfektum Medii ist also dem Präsens nachgebildet, und es konnte überhaupt erst aufkommen, als die ursprüngliche Bedeutung des Perfektes wesentlich verändert war'.

[21] Dionysii Thracis Ars Grammatica, ed. Gustavus Uhlig, 638 b (Lipsiae, Teubner, 1883).

THE NAKŠ-I RUSTAM INSCRIPTIONS OF DARIUS

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Darius the Great of Persia died in 486 B.C. and was buried in a tomb cut in the south face of a steep rocky ridge about nine or ten miles northwest of Persepolis.[1] His tomb is the third in a row of four, if we start counting from the west. The rocky ridge is called Ḥusain Kūh or the 'Mountain of Ḥusain', but Occidentals more commonly call it Nakš-i Rustam 'Portrait of Rustam', a name properly belonging to the tomb of Darius and its sculptured reliefs.

The tomb of Darius, which is identified by its inscriptions, is, like the others, a niche cut into the rock in the shape of a Greek cross about 70 feet high and somewhat less across. The lower part is occupied by some later Sasanian sculptures; the main cross-beam is arranged to look like the facade of a building, with two pillars at the extremes and four columns dividing it into five panels, the central one containing a door which led into the actual burial-chamber; the upper part of the cross contains two rows of figures (one above the other) which seem to

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[1] Easily recognized abbreviations are used in this article, for the following works:

Chr. Bartholomae, Awestasprache und Altpersisch, in Grundriss der iranischen Philologie 1.152–248, hrsgg. von W. Geiger und A. Kuhn; Strassburg, 1901.

Chr. Bartholomae, Altiranisches Wörterbuch; Strassburg, 1904.

H. C. Tolman, Ancient Persian Lexicon and the Texts of the Achaemenian Inscriptions; Vanderbilt University, Nashville, 1908.

Hans Reichelt, Awestisches Elementarbuch; Heidelberg, 1909.

H. C. Tolman, Cuneiform Supplement, and E. L. Johnson, Index Verborum to the Old Persian Inscriptions; Vanderbilt University, Nashville, 1910.

F. H. Weissbach, Die Keilinschriften der Achämeniden; Leipzig, 1911.

F. H. Weissbach, Die Keilinschriften am Grabe des Darius Hystaspis; Abhandl. d. phil.-hist. Kl. d. k. sächs. Gesellschaft d. Wissenschaften, Bd. 29, No. 1; Leipzig, 1911.

A. Meillet and É. Benveniste, Grammaire du Vieux-Perse[2]; Paris, 1931 (ed. 1 by Meillet, 1915).

Ernst Herzfeld, Altpersische Inschriften, erster Ergänzungsband zu den Archaeologischen Mitteilungen aus Iran; Berlin, 1938.

support a throne-platform, on which Darius at the left faces right toward a fire-altar, while a figure of Ahuramazda hovers in the air between them. The other three tombs have similar sculptures but no inscriptions.

The part of the inscriptions which is known as NRa is in the upper field. The Old Persian inscription occupies the background of the niche immediately behind the King; the Elamite version stands to the left of the OP, filling the corner of the niche; the Akkadian version of the same stands outside the niche, on the projecting face of the rock.

These inscriptions were first copied in 1843 by the Dane N. L. Westergaard and W. F. Dittel of Kazan, using field-glasses; they are inaccessible without scaffolding or long ladders, which can hardly be got in that country. In later years they were photographed: in 1878 by Franz Stolze, in 1881 by Marcel Dieulafoy, in 1902 by Anton Sevruguin of Teheran, and finally about 1910 by Friedrich Sarre and Ernst Herzfeld. From all these sources these inscriptions were published by numerous scholars, and little doubt as to the text remains except in a few small gaps.[2]

The inscriptions in the middle part of the cross are in much worse condition. These are known as NRb, or the Lower Inscriptions, in contradistinction from the Upper Inscriptions. The OP version stands in the panel between the two columns to the left of the door into the tomb-chamber; the Elamite stands in the panel to the right of the door, with an Aramaic version beneath; the Akkadian stands in the final panel to the right. Until recently very little satisfactory OP text had been secured (and nothing of the other versions). A few lines in the middle were published by E. Flandin and P. Coste after their visit in 1841; the first 15 lines were copied by Westergaard in transcription, with the first 9 in cuneiform; the photographs of Stolze were quite unsatisfactory; and even with the photographs of Sarre and Herzfeld in 1910, though these gave a considerable amount of broken text and some complete words (cf. the text of Weissbach[3]), it was still impossible to interpret the document coherently.

We are now in a more fortunate situation. Herzfeld has in more recent years had opportunity to make a thorough scrutiny of the NRb inscriptions, and he has embodied the results in his Altpersische In-

[2] For detailed description of the tomb and of the studies of its inscriptions down to 1911, see Wb., Grab.

[3] Neither Tolman in CS and Johnson in Index Verborum, nor Wb. in KlAch., has the fruits of such a good reading as Wb., Grab.

schriften, published in 1938. He presents a facsimile drawing of the visible characters and parts of characters of the OP and the Akk. versions, and of fragments of the Aramaic version, with transcription and normalization of the OP and the Akk., German translation, and brief notes. In Plate III he gives the left half of lines 2–18 of the OP; in Plate IV, the Aramaic version; in Plate V, some small fragments of another copy of the OP version, found at Persepolis, and now at the Oriental Institute of the University of Chicago.

Shorter trilingual inscriptions, NRc and NRd, are attached to the upper two of three figures which stand one above the other at the extreme left of the upper field of the cross; these were first copied in 1848 by an Englishman named Tasker, who copied also an inscription in three lines (OP, Elam., Akk.) identifying the platform-bearer at the left of the lower row. Babin and Houssay in 1885 copied seven further such inscriptions, confirming Oppert's conjecture that a label was attached to each figure. The inscriptions are numbered NRi to NRxv for the upper row, beginning at the right, and NRxvi to NRxxx for the lower row (Weissbach's numbering).

It seems desirable at this time to make the complete text of the Nakš-i Rustam OP inscriptions accessible in one place, even though the new material is limited chiefly to NRb; for even NRa has not been edited since the works of Tolman (Lex., 1908) and of Weissbach (KlAch., 1911; Grab, 1911), and these represent different stages of accuracy. NRb I have divided into short sub-sections, to facilitate reference from text to translation, and vice versa; and where the surface of the rock was (according to Herzfeld's statement, ApI 310, and elsewhere, and his transliteration and normalization, ApI 4–9) too rough to permit signs to be incised, I have set ° to mark the gap and indicate the spacing.

NRa, Text:

1	baga : vazraka : Auramazdā : hya : im-	§1
2	ām : būmim : adā : hya : adam asm-	
3	ānam : adā : hya : martiyam : adā : h-	
4	ya : šiyātim : adā : martiyahyā	
5	: hya : Dārayavaum : xšāyaθiyam : ak-	
6	unauš : aivam : parūvnām : xšāyaθ-	
7	iyam : aivam : parūvnām : framātā-	
8	ram : adam : Dārayavauš : xšāyaθiya : va-	§2
9	zraka : xšāyaθiya : xšāyaθiyānām	
10	: xšāyaθiya : dahyūnām : vispazanā-	

11 nãm : xšāyaθiya : ahyāyā : būmi-
12 yā : vazrakāyā : dūraiapiy : Vištās-
13 pahyā : puça : Haxāmanišiya : Pārsa : P-
14 ārsahyā : puça : Ariya : Ariya : ci-
15 ça : θātiy : Dārayavauš : xš[ā]ya-   §3
16 θiya : vašnā : Auramazdāhā : im[ā :]
17 dahyāva : tyā : adam : agarbāya[m :]
18 apataram : hacā : Pārsā : adamšā[m :]
19 patiyaxšayaiy : manā : bājim : aba[ra]-
20 ha : tyašām : hacāma : aθahy : ava : [a]-
21 kunava : dātam : tya : manā : avadi[š :]
22 adāriya : Māda : Ūvja : Parθava : Hara[i]-
23 va : Bāxtriš : Suguda : Uvāraz[m]-
24 iš : Zraka : Harauvatiš : θataguš : Ga-
25 dāra : Hiduš : Sakā : haumavargā : Sa-
26 kā : tigraxaudā : Bābiru[š :] A-
27 θurā : Arabāya : Mudrāya : Arm[ina]
28 : Katpatuka : Sparda : Yauna : Sakā : tyai[y : pa]-
29 radraya : Skudra : Yaunā : takabarā : Put[ā]y-
30 ā : Kūšiyā : Maciyā : Karkā : θātiy : D-   §4
31 ārayavauš : xšāyaθiya : Auramazdā [: ya]θ-
32 ā : avaina : imām : būmim : yau[datīm :]
33 pasāvadim : manā : frābara : mām [: xšā]-
34 yaθiyam : akunauš : adam : xšā[yaθ]iya
35 : amiy : vašnā : Auramazdāh[ā] : a-
36 damšim : gāθavā : niyašādayam [: tya]šā-
37 m : adam : aθaham : ava : akunava : ya[θā :] mām :
38 kāma : āha : yadipatiy : maniy[āhaiy : t]-
39 ya : ciyakaram : [āha : a]vā : dahyāva
40 : tyā : Dāraya[va]uš : xšāya[θ]iya
41 : adāraya : patikarā : dīdiy : tyai[y] : g-
42 āθum : baratiy : a[va]dā : xšnāsāhy :
43 adataiy : azdā : bavā[t]iy : Pār[sa]h[yā :]
44 martiyahyā : dūraiy : aršt[i]š : pa-
45 rāgmatā : adataiy : azdā : bavāti-
46 y : Pārsa : martiya : dūrayapiy [: hac]ā : Pā-
47 rsā : partaram : patiyajatā : θātiy : Dā-   §5
48 rayavauš : xšāyaθiya : aita : t[ya :] karta-
49 m : ava : visam : vašnā : Auramazdāhā : ak-
50 unavam : Auramazdā(ma)iy : upastām : aba-

51   ra : yātā : kartam : akuna[vam : mā]m : A
52   uramazdā : pātuv : hacā · ga[stā] : utāma-
53   iy : viθam : utā : imām : [ἀ]ahyāum : aita : ada-
54   m : Auramazdām : jadiyᾱmiy : aitama-
55   iy : Auramazdā : dadātu⟨v⟩ :
56   martiyā : hyā : Auramazdᾱh-   §6
57   ā : framānā : hauvtaiy : gas·
58   tā : mā : θadaya : paθim :
59   tyām : rāstām : mā
60   : avarada : mā : stabava

NRₐ, TRANSLATION:

§1. A great god is Ahuramazda, who created this earth, who created yonder sky, who created man, who created happiness for man, who made Darius king, one king of many, one lord of many.

§2. I am Darius the great king, king of kings, king of countries containing all kinds of men, king on this great earth far and wide, son of Hystaspes, an Achaemenian, a Persian, son of a Persian, an Aryan, having Aryan lineage.

§3. Says Darius the king: By the favor of Ahuramazda these (are) the countries which I seized outside of Persia; I made myself ruler of them; they brought tribute to me; what was said to them by me, that they did; the law which is mine, that held them firm: Media, Susiana, Parthia, Aria, Bactria, Sogdiana, Chorasmia, Drangiana, Arachosia, Sattagydia, Gandara, Sindh, the Amyrgian Scythians, the Scythians of pointed caps, Babylon, Assyria, Arabia, Egypt, Armenia, Cappadocia, Sardis, Ionia, the Scythians who are across the sea, Skudra, the shield-bearing Ionians, the men of Punt, the men of Kush, the men of Maka, the Carians.

§4. Says Darius the king: Ahuramazda, when he saw this earth in commotion, thereafter bestowed it upon me, made me king; I am king. By the favor of Ahuramazda I put it back on its foundation; what I said to them, that they did, as was my desire.   If now thou shalt think that 'How many are those countries which Darius the king held?', look at the pictures (of those) who bear the throne, then shalt thou know, then shall it be known to thee: the spear of a Persian man has gone forth far; then shall it be known to thee, a Persian man has smitten the foe far indeed from Persia.

§5. Says Darius the king: This which was done, all that by the favor of Ahuramazda I did; Ahuramazda bore me aid, until I did the work.

Me may Ahuramazda protect from harm, and my house, and this land: this I pray of Ahuramazda, this may Ahuramazda give to me!

§6. O man, what is the command of Ahuramazda, let this not seem repugnant to thee; do not depart from the right; do not rise in revolt.

NOTES TO NRA:

6 and 7 *parūvnām*: graphic for *parūnām*.

8–9 *vazraka*: normalization now supported by Benveniste, Origines de la Formation des Noms en IE 15 (1935).

20 *aθahy*: 3d sg. aor. pass.; or normalize *aθahya*, impf. *-ya-* passive with act. ending. On this point, cf. LANG. 13.298.

22 *adāriya*: inexact writing for (active) *adāraya*, found NRa 41, Bh. 1.85, 2.9, 3.23; but *adāriy* of Bh. 2.75, 90 is passive. Cf. Wb. Grab 33; also JAOS 35.347 n., 58.325.

22 *Ūvja*: that is, *Ūja*; cf. *Ūjaiy* in line 46 of the Record of Darius's Palace at Susa (JAOS 53.8) and *Ūja* in the Daiva-Insc. of Xerxes, line 20 (LANG. 13.294,300).

28–9 *[pa]radraya*: this restoration was established by the phrase *para : Sugdam* in the Limits of Darius's Empire; cf. Buck, LANG. 3.2,4. Thus Rawlinson, JRAS 10.294,297 (1847), who first restored *[pa]radraya*, was right, and later scholars, who preferred *[ta]radraya*, were wrong.

29–30 *Put[ā]yā*: vocalism established by *Putāyā* in Daiva-Insc. 28, where reading is certain; cf. LANG. 13.294,299. The Elam. ᴵ*pu-ú-ti-ya-ap*, NRa 24–5, gives no evidence for *Put[i]yā* (so read by all before discovery of Daiva-Insc.), because Elam. has no special sign for *ta*. In ApI 47–9, Hz, gives the inscriptions over the figures of the platform-bearers of the southern tomb at Nakš-i Rustam, transcribing No. 27 as follows: iym : putiy : = *iyam : Putiya* : 'this is the Pontian'; but his drawing shows distinctly putay = *Putāya*.

30 *Karkā*: the meaning 'Carians' is now certain; cf. W. Eilers, OLZ 38.201–13 (1935).

32 *yau[datīm]*: so, with Bartholomae IF 12.132–5 and AiW 1231–2, rather than Wb.'s *yau[dinim]*, KlAch. 88. The verb is now found in OP in the Daiva-Insc. 31–2, *ayauda*; cf. LANG. 13.294,299, and correction in JAOS 58.116 n.

38–9 *maniy[āhaiy : t]ya*: so, rather than Wb.'s *maniy[āhay : t]ya*, Grab 22, despite *maniyāhay* Dar. Pers. e 20 (uncertain in Bh. 4.39, because only the first two characters are legible), because of *yadimaniyāiy* Daiva-Insc. 47, miswritten for *yadiy : maniyāhaiy*; cf. LANG. 13.302. Tolman's *maniyā[ha]y*, Lex. 46, is inadequate to fil the gap.

46 *dūrayapiy*: confirmed by the photograph, cf. Tolman, Lex. 101; Wb.'s *dūray*, KlAch. 90 and Grab 22, is an error.

50 *Auramazdā(ma)iy*: the character *ma* is lacking on the stone.

52 *ga[stā]*: first proposed by Foy, confirmed by Wb. Grab 22, and accepted by Tolman, Sup. 59, though only part of the first character is legible. The word is now found in this idiom in a Susian insc. of Artaxerxes III (cf. JAOS 54.50), and in the Daiva-Insc. of Xerxes, lines 57–8 (cf. LANG. 13.296); as well as in a different syntactical use in NRa 57–8.

55: Between this line and 55 there is blank space that would have held one line. There are similar gaps in the Elamite version between 45 and 46, and in the Akkadian between 34 and 35; in each, this is the division between §5 and §6.

55–60: These lines have fewer characters because the space is narrowed by the slanting support of the throne-platform.

60 *stabava*: not *starava* or *stakava*, as have been proposed; while the *ba* is mutilated, it is assured by Meillet, JAs., Series 10, 18.637 (1911), and Benveniste in Gram.² §202, citing NP *stämb* 'rebel', etc.

NRb, Text:

1	baga : vazraka : Auramazdā : hya : adadā : i-	§7
2	ma : frašam : tya : vainatai[y] : hya : adadā : ši-	
3	yātim : martiyahyā : hya : xraθum : ut-	
4	ā : aruvastam : upariy : Dārayavaum : xšā-	
5	yaθiyam : nīyasaya : θātiy : Dārayavauš : xšāya-	§8a
6	°θiya : vašnā : Auramazdāhā : avākaram : a-	
7	miy : tya : rāstam : dau[št]ā : amiy : miθa : na-	
8	[i]y : dauštā : amiy : na[imā] : kāma : tya : skauθ-	
9	iš : tunuvatahyā : rā[di]y : miθa : kariyaiš	
10	: naimā : ava : kāma : tya : t[u]nuvā : skauθaiš : r-	
11	ādiy : miθa : kariyaiš : tya : rāstam : ava : mām :	§8b
12	kāma : martiyam : draujanam : naiy : daušt[ā] : am-	
13	iy : naiy : manauviš : am[iy : ty]āmaiy : ++tana-	
14	yā : bavatiy : daršam : dārayāmiy : manahā:	
15	uvaipašiyahyā : darša[m :] xšayamna : a[m]iy [:]	
16	martiya : hya : hataxšataiy [:] anudim [: ha]karrta-	§8c
17	hyā : avaθādim : paribarāmiy : hya : [v-]	
18	ināθayatiy : anudim : vinastah[yā : ava]θ-	
19	ā : parsāmiy : naim[ā] : kāma : tya : mar[tiya]m	
20	: vināθayaiš : naipatimā : ava : kāma : yadi-	

21 y : vināθayaiš : naiy : fraθiyaiš : martiya :   §8d
22 tya : pat°iy : mar[t]i[ya]m : θātiy : ava : mām :
23 naiy : varnavataiy : yātā : uradanām : hadu-
24 gām : āxšnautiy : martiya : tya : kunau-   §8e
25 tiy : yadivā : ābaratiy : anuv : tauman-
26 išaiy : xšnuta [°°:] amiy : utā : mām : vas-
27 iy : kāma : utā : u[xšna]uš : amiy : avākaram-   §8f
28 camaiy : ušiy : u[t]ā : framānā : yaθāmai-
29 y : tya : kartam : vaināhy [:] yadivā : āxšnav-
30 āhy : utā : viθ°i°yā : utā : spāθma-
31 i°da°yā : aitamai°y° : [dīdiy] : aruvastam :
32 upariy : manašc[ā] : [°°uši]cā : ima : patimai-
33 y : aruvastam : t°ya°maiy : tanuš : tāvaya-   §8g
34 t[i°]y : hamaranakara : a[m°]iy : ušhamaranakara : hakara-
35 mci°y : ušiyā : gā[θa]vā : vainātaiy : yaciy :
36 va[i]nāmiy : hamiçiya[m] : yaciy : naiy : vainā-
37 miy : utā : ušibiyā : utā : framānāyā
38 : a°°dakaiy : fratara : maniyaiy : aruvāθā : ya-
39 di°y : vaināmiy : hamiçiyam : yaθā : yadiy :
40 na°iy : vaināmiy : yāumainiš : amiy : u-   §8h
41 t[ā] : dastaibiyā : utā : pādaibiyā : asabā-
42 ra [:] uvāsabāra : amiy : θanuvaniya : uθa-
43 nuvaniya : amiy : utā : pastiš : utā
44 : asabāra : aršt[i]ka : amiy : uvārštika :
45 utā : pastiš : utā : asabāra : utā : ūvnarā   §8i
46 : tyā : Auramazdā : [upa]r[iy : mā]m : nīyasaya : utā-
47 diš : atāvayam : barta[nai]y : vašnā : Auramazdāh-
48 ā : tyamaiy : kartam : imaibiš : ūv[naraibiš] : aku-
49 navam [:] tyā : mām : Auramazdā : upariy : nīyasaya:
50 marī°kā : daršam : azdā : kušuvā : [ciy]ākaram   §9a
51 : am[i]y : ciyākaramcamaiy : ūv[narā : c]iyākara-
52 mcamaiy : pariyanam : mātaiy : ++++++tam :
53 θadaya° : tyataiy : gaušāyā : [xšnutam] : avaš-
54 ciy : āxšnūdiy : tya : parta[mtaiy : as]ti-
55 y : marīkā : mātaiy : avaš[ciy : ++++++]uš   §9b
56 [:] kunavātaiy : tya : [manā : kartam : as]tiy
57 : avašciy : dīdiy : yaciy [: +++++++++] : mā :
58 [ta]iy : karta(m) : +++++ : mā [: ++++++]ātiy-
59 ā : ayā[uma]iniš : bavātiy [: marīkā : xšāya]θiya
60 : mā : raxθatuv : ++++++++++++++++iš

NRb, Translation:

§7. A great god is Ahuramazda, who created this beautiful work which is seen, who created happiness for man, who bestowed wisdom and kindliness upon Darius the king.

§8a. Says Darius the king: By the favor of Ahuramazda I am of such a sort that I am a friend to the right, I am not a friend to wrong; it is not my desire that the poor man should have wrong done to him by the mighty; it is not my desire that the mighty man should have wrong done to him by the poor.

§8b. What is right, that is my desire. I am not a friend to the man who is the follower of the Lie. I am not revengeful. What things are ++++ to me, those I hold firmly under control. I am firmly ruling over my own temperament.

§8c. The man who cooperates, him according to his cooperative action, thus him do I reward. Who does harm, him according to the damage thus I punish. It is not my desire that (anybody) should harm a man; it is also not my desire, if (someone) should harm, he should not be punished.

§8d. What a man says against a man, that does not convince me, until he satisfies the Ordinance of Good Regulations.

§8e. What a man does or performs (for others) according to his (natural) powers, (therewith) I am satisfied, and my pleasure is great, and I am well satisfied.

§8f. Of such a sort is my understanding and my command: when what has been done by me thou shalt see or hear of, (whether thou be) in the city or in the war-camp, behold this my kindliness, over temperament and understanding this my kindliness indeed.

§8g. As far as my body has the strength, as battle-fighter I am a good battle-fighter. Once let there be seen with understanding in the council, what I see (to be) hostile, what I see (to be) not (hostile); with understanding and with command then I am first to think of kindly acts, when I see an enemy as well as when I see a not(-enemy).

§8h. Trained am I both with hands and with feet. As a horseman I am a good horseman. As a bowman I am a good bowman both afoot and on horseback. As a spearman I am a good spearman both afoot and on horseback.

§8i. And the (physical) skillfulnesses which Ahuramazda has bestowed upon me and I have had the strength to use them—by the favor of Ahuramazda what has been done by me, I have done with those skillfulnesses which Ahuramazda has bestowed upon me.

§9a. O menial, vigorously make thou known how great I am, and how great my skillfulnesses, and how great my superiority. Let that not seem [trifling] which has been heard by thy ear. That do thou hear, which is communicated to thee.

§9b. O menial, let that not be made [trifling] to thee, which has been [done by me]. See that which [in +++] is not to be done by thee. Let [+++] not be untrained [in ++++]. [O menial,] let the king not (feel himself obliged to) inflict punishment (?) [for wrong-doing (?) on the dwellers (in the land)].

NOTES TO NRB:

2 *frašam*: the Akk. equivalent is *bu-nu*[4] 'beauty, goodness, glory'; the Avestan *fraša-* is used in connection with the future life. The OP word applies to the constructions (palaces, tombs, etc.) of the Persian kings. Cf. Hz. ApI 156–65.

3 *xraθum*: etymologically equal to Av. *xratav- xraθw-* 'geistiges Wollen und Können' (Bthl. AiW 535), and in OP defined as 'wisdom' by the Akk. *ṭēmē ḫissatum* 'word or message of wisdom'. Cf. Hz. ApI 235–7.

4 *ăruvastam*: in form, abstract to *ărvant-*; its meaning is defined by Akk. *ᵘit-ba-ru-tum* 'companionship', which separates it from Av. *aʳrvant* 'schnell, tapfer, Held', and associates it with Av. *ᵘrvaθa-* 'amicus, befreundet, Freund' (Bthl. AiW 200, 1537). Cf. Hz. ApI 80–6.

5 *nīyasaya*: contracted for *niyayasaya*, cf. LANG. 13.299–300; probably *ni-yam-*, present *yasa-* = Skt. *yaccha-*, meaning 'spread down upon'. The Akk. is simply *iddinnu* 'gave'. Cf. Hz. ApI 359–61.

6 *avākaram* (also in 28): containing *ava-* 'that' + *kara-* 'time (= repetition)', cf. Meillet, Gram. §293 (both editions); felt to be 'thus doing', as from *kar-* 'do', and so translated by Akk. *ap-pit-tum ep-ši-ka* '(so) handelte ich stets'. Cf. Hz. ApI 101–3.

7 *miθa*: 'wrong', the opposite of *rāstam*, as is shown by the Akk. *la ket-tum (kettum = rāstam)*; but *miθa* 7 and 9 is represented by Akk. *pi-iš-qi*, the connections of which are not too certain. OP *miθa* has Av. cognates, e.g. *miθaoxta-* 'falsch gesprochen' (Bthl. AiW 1181–2), as well as the Skt. *mith-* 'to meet (as friend or antagonist), engage in altercation'. Cf. Hz. ApI 259–61. This may then be the puzzling

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[4] I am again indebted to my colleague and friend, Prof. E. A. Speiser, who has contributed generously of his time and his learning that I might utilize the Akkadian version.

element in *hamiçiya-* 'rebellious', **ha-miθ-r(a)-iya-*, rather than the equivalent of Skt. *mitrá-* 'friend'; cf. Hz. ApI 184-8.

8 *naimā*, cf. 10, 19: in *naimā : kāma* we have the enclitic accusative form, as compared with the orthotone in the (affirmative) phrase *mām : kāma*; cf. Hz. ApI 240.   For the idiom, cf. Lang. 9.39.

9 *tunuvatahyā*: pres. ptc. of *tunvant-*, with gen. sg. of thematic form, to root *tav-* 'be strong'; assuring *tunuvatam* Bh. 4.65.   Cf. Hz. ApI 329-33, who prefers to take from root *tar-* 'overpower', **tr̥n-* becoming *tun-* as in *kunautiy* 'he makes', from **kr̥n-*, cf. Skt. *kr̥nóti*.

9 *kariyaiš*: *-ya-* passive, opt., with secondary active ending of type seen in indic. *akunauš*; cf. Meillet-Benveniste, Gram. 128.   Hz. ApI 228 normalizes *kariyaiša*, and explains as a fut. pass. of the desiderative conjugation, with suffix as in Skt. stem *kariṣya-*.

13 *manauviš*: according to Hz. ApI 242-3, an *-i-* stem adj. to the stem *manau-* seen in Av. *manaoθrī-* 'Gemahnerin (an)' (Bthl. AiW 1125), with double writing of the *-u̯-*; meaning 'memor, irae memor' and therefore 'revengeful', as is indicated by the Akk. *ul man-ma šá i-ga-a-ga ana-ku* 'ich bin nicht einer der zürnt, wütet'.   I cannot find a parallel to this *-i-* stem adj. to a present stem in *-au-*, and propose rather **manas-vin-*, with nom. **manas-vī*, with added *-s* in nom. in OP, as in *Harauvatiš* = Skt. *sarasvatī*, etc. (Meillet-Benveniste, Gram. §308); the stem-finals are of course different, but both have earlier nom. in *-ī*.   The *-vin-* suffix is found in Skt., where, though not common, it is in most instances attached to stems in *-as-* (Whitney, Skt. Gram.³ §1232), as here.   The meaning is as Hz. interprets it.

15 *xšayamna*: pres. ptc. mid. to root *xšay-* 'rule', seen in *patiyaxšayaiy* NRa 19 and in *xšaçam* 'kingdom', *xšāyaθiya* 'king'.   Cf. Hz. ApI 237.

16 *anudim*: the prep. *anu* is here immediately followed by the enclitic pronoun *dim*, while its genitive object comes next.   But *Ufrātuvā* in *anuv : Ufrātuvā* Bh. 1.92 is with difficulty explained as a gen., and seems rather to be a loc. or an instr., cf. Meillet-Benveniste, Gram. 183.   Cf. Hz. ApI 71-2.

16-7 *[ha]karrtahyā*: with dittography of the *rᵃ*-sign.   Hz. ApI 5 transliterates + kr?rp?/hya, and attempts nothing further in his normalization, ApI 9; but the parallel phrasing in 18 makes the text reasonably certain, though the Akk. version omits the corresponding phrase.

17-8 *[v]ināθayatiy*: pres. act. to causative stem *nāsaya-*, = Skt. *nāšayati*, Lat. *nocet*.   Not mid. *-taiy*, as Hz. ApI 8, 267-9 normalizes it.   Other forms are past ptc. gen. sg. *vinastah[yā]* 18, opt. act. 3d sg.

vināθayaiš 20 and 21 (Hz. *-aiša*, with same interpretation of form as for *kariyaiš* in 9, ApI 267-9).   These assure Foy's *viyanā[θa]ya* Bh. 4.66.

19 *mar[tiya]m*: so for Hz.'s mn? + + +m?, ApI 8.

20 and 21 *vināθayaiš*: see on *[v]ināθayatiy* 17-8.

21 *fraθiyaiš*: *-ya-* pass., opt., like *kariyaiš* 9, q.v.   Hz. ApI 167 normalizes *-aiša* and interprets its form like that of *kariyaiš*.   The root is Iran. *fras-*, Skt. *praś-*, Lat. *prec-or*; the common *-sk-* present stem is Iran *parsa-*, Skt. *pṛccha-*, Lat. *posce-*.

22 *pat°iy*: I read pt°iy for Hz.'s pr +iy = *par[sa]iy* 'in court'.   I admit, however, that the sentence refers to testimony in court, but find a prep. needed for the meaning, before the next word *mar[t]i[ya]m*, for which Hz., ApI 8, gives m?r?t?i?ʸ?m, without attempting the obvious normalization.   On Hz.'s reading *par[sa]iy*, cf. ApI 273-4.

23 *yātā* etc.: this clause I take not with the following, as Hz. does, but with the preceding.

23 *uradanām*: adj. derivative of *su-* 'good' and root *reĝ-* 'to direct', seen in *rāstam* NRb 7 and *rāstām* NRa 59.   The *uradanā haduga* is evidently a law on the acceptability of testimony in court.   Cf. Hz. ApI 206-7, 188-90.

24 *āxšnautiy*: athematic present of *ā* + *xšnav-* 'Genüge haben an' (Bthl. AiW 557); Av. has also adj. *xšnav-* 'Genüge leistend', ptc. *xšnūta-*, abstract sb. *xšnūtay-* 'Zufreidenstellung' (AiW 559-60).   I take this as an extension of the root *xšnā-* 'learn' (IE *ĝnō-*), with a slight semantic shift; for the extension, cf. **dō-* and **doy-* 'give'.   Other forms in this inscription are 29-30 *āxšnavāhy*, 2nd sg. subj.; 26 *xšnuta*, nom. sg. ptc. as adj.; and perhaps 27 *u[xšna]uš*, nom. sg. adj.   Hz. ApI 238-40 derives the Iranian root *xšnav-* not from IE **ĝnō-*, but from Iran. *srav-* (IE **ḱleu-*) 'hear', which has in Indo-Iranian a present formation with a *-nu-* suffix, Skt. *śṛnóti* = Iran. **sunauti* like Skt. *kṛnóti* = OP *kunautiy*; if then the *-u-* could disappear, we should have **snau-* > **šnau-* > *xšnau-*.   But I cannot see why the *-u-* should be lost, and the meaning 'hear', which seems to be required by the context of *āxšnavāhy* 29-30, may be merely a development 'learn' > learn of > hear'.

25-6 *anuv* : *taumanišaiy*: the form here governed by *anuv* is puzzling, cf. Hz. ApI 327.   The final is the enclitic gen. *-šaiy*, before which we have *tauman-ai* or *-ī* or *-aiš* or *-īš* (for the double value of the *-š-*, cf. Bh. 1.95-6 *āpišim* = *āpiš-šim*).   The word is clearly a case-form of the nom. *taumā* 'strength' found Bh. 4.74,78, stem *tauman-*.   A dative in *-ai* is not found elsewhere in OP; a locative in *-i* should have a postpositive *-ā*; *-aiš* would be a genitive of a stem **taumani-*, but we

hardly find -*man*- stems extended by -*i*-.   I suggest that we have here
an inst. pl. in -*īš*, the case-use with *anuv* being matched in *anuv* : *Ufrā-
tuvā* Bh. 1.92, see note on *anudim* 16, above, and the APPENDIX at the
end of this article.

27 *kāma*: after this, the OP omits the equivalent of (illegible) line
17 of the Akk.

27-8 *avākaramcamaiy*: with two enclitics, like *naipatimā* 20.

28 *ušiy*: dual, 'two ears', then 'understanding', as in Avestan (AiW
414).   Cf. Hz. ApI 342-4.

30-1 *viθiya* : *utā* : *spāθmaidaya*: I accept Hz.'s argument, ApI 310-5,
that these two words, both locative sg., mean 'domi militiaeque', which
is suited to the context and confirmed by the Akk. 19-20 *ina bī-ti u ina
ma-dak-tum*.   Av. *spāda*- 'army' and *hamaspaθmaēdaya*- (name of a
deity and of his festival) both are comparable (AiW 1617, 1775).

31 [*dīdiy*]; the Akk. *a-mu-ur* demands this reading, for which Hz.'s
handdrawn copy does not allow adequate space; but Hz. gives it in
his text, ApI 8, and Wb. Grab, Plate VI, indicates that the space is
sufficient.

33 *tanuš*: 'body', common in Av., but hitherto known in OP only
in the Accession of Xerxes 31, where it functions as a reflexive pronoun
(LANG. 9.37,40).   Cf. Hz. ApI 325-6.

33-4 *tāvayat*[*i*]*y*: a present formation to *tav*- 'be strong'; Hz. ApI 8 has
the middle *tāvayataiy*, but 328 seems to prefer the active -*tiy*.   The
impf. 1st sg. *atāvayam* is found in 47.

34 *ušhamaranakara*: the -*š*- is the product of sandhi in *su-sam*- >
sušam-, and by contamination in Iranian with (initial) *ham*-, the form
(*h*)*ušham*- is produced, as in numerous Avestan words (Bthl. Gdr.
1.167; Reichelt, Aw. ElB §103).

35: The alternative clause with the negative is omitted in the Akk.
version.

35 *hakaramciy*: *hakaram* 'once', like Skt. *sakṛt*; Hz. ApI 181-2 thinks
it has become a subordinating conjunction, 'wenn, if', but this seems to
me unnecessary (see my translation).

37 *ušibiyā*: inst. dual, with case ending -*bhy-ā*, corresponding to Skt.
-*bhy-am*, different extensions of the same -*bhi*.

38: The equivalent of this line is omitted in the Akk. version.

38 *aruvāθā*: in Hz.'s copy, a f u v a y a, easily legible, but not interpret-
able.   By changing two wedges, Hz. emends to a r ᵘ u v a θ a = *aruvāθā*
(my normalization; Hz. '*rᵘvāθā*), = Av. ᵘ*rvaθā*- 'Freundschaft' (AiW
1537), as a different abstract from the same root as *aruvastam* (see note
on line 4).   Cf. Hz. ApI 293-6.

40: The equivalent of this line is omitted in the Akk. version.

40 *yāumainis*: *-i-* stem adj. to subst. *yauman-*, with vṛddhi; to root *yav-* 'harness', then 'exercise'. The *-i-* in *-main-* is epenthetic, the first OP example of this phenomenon which is so general in Avestan. Cf. Hz. ApI 365–6.

41 *dastaibiyā, pādaibiya*: inst. dual, cf. on *ušibiyā* 37.

42 *θanuvaniya*: 'bowman', derivative of stem in Av. *θanvar/n-* (AiW 785). Cf. Hz. ApI 339.

43 *pastiš*: from **ped-tis* 'infantryman'.

44 *arštika*: derivative of *aršt[i]š*, NRa 44.

45 *ūvnarā*: neut. pl. of an adj., meaning approximately 'the good things of a man', = Skt. *su-* + *nara-*; the precise meaning and association with 'man' is shown by the Akk. equivalent in 30–1 *ina* ^{iᵘ}*it-ba-ru-ta-a a-ga-a* = OP *imaibiš ūvna[raibiš]*. Cf. Hz. ApI 200–6, who regards association with *nara-* 'man' as a popular etymology, and thinks the word is a ritual word, 'healing' or the like, and closely associated with Av. *yaoxštiš* in meaning.

50 *marīkā*: defined by Akk. ^{iᵘ}*gal-la* 'menial, minderwertiger'; derivative of stem seen in Vedic *marya-* 'young man'. Cf. Hz. ApI 251–3.

50 *kušuvā* : 2d sg. imv. mid. (ending = Skt. *-sva*) to pret. stem seen in 3d sg. *akutā*.

51 *ciyākaram*: always with *-ā-* in its three occurrences 50–52, though written *ciyakaram* NRa 39. In the second and third occurrences Hz. reads *-karamamciy*, which might be taken as *-karam-ma-ciy*, with the enclitics in reversed order from that seen in *avākaram-ca-maiy* 27–8. But the *mᵃ* character would not be written twice in *-karam-ma-ciy*, and it seems quite certain to me that we must read *-karamcamaiy*, though the stonecutter may accidentally have reversed the order of the two signs.

52 *pariyanam*: an abstract in *-ana-* to the adv.-prep. *pariy*, Av. *pairi*, Skt. *pari*; the meaning 'superiority' is based on that seen in Av. 'vorne, über—hin', etc., and Skt. 'much, excessively' (as prefix). Cf. Hz. ApI 273, who would like to derive it from another source.

52 on: The filling of the gaps is highly conjectural, and hardly more than a basis for further suggestions; but sometimes an illuminating word is left in the Akk., which is also very fragmentary.

52: We need a long word meaning 'trifling' or the like, as the Akk. has *la i-ba-an-na* 'not good'.

53: *xšnutam* 'heard' is obviously appropriate to the sense.

54: The Akk. has *šá a-na-* ... *-ak-ka* 'which I (?) ... you', and the remains of prt before the gap and tiy after it lend themselves to the

proposed text, *parta*[*m*] being from Av. *⁴par-* 'hindurch', hinübergehen'
(AiW 851).

55: The Akk. indicates the same meaning as in 52.

56: The Akk. *ep-pu-šu* 'I have made' suggests the restoration.

57: The gap may have had a prepositional phrase, as the Akk.
seems to have *ina* 'in'.

58 beginning: The Akk. *la te-ep-pu-uš* 'you are not to make' seems
to indicate our text, though we must then assume that the final *m* of
kartam failed to be written.

58–9: The sentence should have a subject in the gap before *mā*,
which may have been followed by a long word whose locative ending is
still legible.   The next word may be the negative of the *yāumainiš* of
40.   The verb *bavātiy* must be subjunctive after the *mā*, and Hz. ApI 6,
9 has it thus in his transcript and in his normalization, though his
drawing of the inscription is merely b v t i y = *bavatiy*.

59–60: The Akk. *ᵘgal-la šarru* (?) *ib!-ka*? *la* (Speiser's reading of Hz.'s
copy) gives 'Menial, king (?) ... not', and at the very end there is
-uš-šá-bi, which may mean 'settle(rs)'.

60 *raxθatuv*: impv. 3d sg., of entirely unknown meaning.   Cf. Hz.
ApI 284–5.   In the translation I have arbitrarily assigned to the word
a meaning which is possible in connection with the Akk. of the passage;
see preceding note.

THE SHORTER INSCRIPTIONS:

NRc	1	Gaubaruva : Pātišuvariš : Dāra-
	2	yavahauš : xšāyaθiyahyā : šarastibara
NRd	1	Aspacanā : vaçabara : Dārayavahauš : xš-
	2	āyaθiyahyā : isuvām : dārayatiy
NR	I	iyam : Pārsa
	II	iyam : [Māda]
	III	iyam : Uvja
	IV	iyam : Parθava
	XV	iyam : Sakā : tigraxa[udā]
	XVI	[iyam : Bā]biruš
	XVII	iyam : Aθuriya
	XXIX	iyam : Maciyā

NRc   Gobryas, a Patischorian, spear-bearer of King Darius.

NRd   Aspathines, the bowbearer, holds the bow-cover of King
         Darius.

NR   ɪ   This is the Persian.
     ɪɪ   This is the Mede.
    ɪɪɪ   This is the Susian.
     ɪᴠ   This is the Parthian.
    xv   This is the Scythians with pointed caps.
   xvɪ   This is Babylon.
  xvɪɪ   This is the Assyrian.
  xxɪx   This is the men of Maka.

NRc 1 *šarastibara*: probably an erroneous writing for *arštibara* 'spear-bearer'.

NRd 2 *isuvām*: not gen. pl., as was previously supposed, for Wb. (handwritten marginalia to Grab 30) assures me that the verb *dārayatiy* is a certain reading; it is therefore acc. sg., and the ground for emending to *-nām* falls away.

NR xv and xxɪx: Curiously, the predicates are plural in form.

NR xvɪ: We expect *Bābiruviya* 'Babylonian', but find *Bābiruš* 'Babylon'.

Appendix: The Iranian Instrumental Plural in *-iš*.

A peculiar form of the instrumental plural ending in *-iš* or *īš* is found in the Avestan; the commonest forms are *nāmōnīš* (Gathic Ys. 51.22, quoted therefrom at Ys. 15.2) and *ašaonīš* (Visp. 21.3). Like other instr. forms, these are used also as nom. and acc.: *nāmōnīš* Yt. 1.11,15,16,19; *ašaonīš* Ys. 71.10. This ending is perhaps extended to participial stems in *-nt-*: *γžarə.γžarəntīš* Vd. 5.19 as nom. pl. masc.; *sraščintīš* Vd. 3.29 as nom. pl. fem..; but *savavuhaitīs* Vd. 19.37 is acc. pl. fem. But *yātuš* Ys. 12.4 'mit den Zauberern' is graphic for inst. *yātuviš* < *yātuwiš* < *yātubiš*, with the usual ending of the case; and *vavuhīš* Ys. 71.10, graphic for *vavhvīš*, as acc. pl. neut., may be for *vavhuviš* < *-uwiš* < *-ubiš*: so that these two, and any like them, should be excluded from consideration. There is also the form *haptō.-karəšvairīš* 'seven regions (of the earth)' Yt. 8.9, which may be this instr. form used as acc. pl. neut.; but the compound is properly an adj., and the form is correct for acc. pl. fem. of stem *-varī* to masc. *-van-* (Whitney, Skt. Gr.³ §1171b), the gender being given by the acc. pl. fem. *daivhuš* in the next phrase, in a parallel construction. For citations, etc., cf. Bthl. Gdr. 1.225; A. V. W. Jackson, Avestan Gram. §308, §231; Reichelt, Aw. E1B §350, §427; and Bthl. AiW s. vv.

This instrumental in *-iš* (or *-īš*) seems then to be limited to *-n-* stems,

with a possible extension to -*nt*- stems; and therefore its origin is to be sought in the -*n*- stems. Thus we should have, with the regular ending of the case, inst. *nāmabiš* (Skt. *nāmabhiš*) to nom.-acc. *nāmąn* (Iranian formation with long stem-vowel, suffixless; Reichelt, Aw. ElB §341), gen. *nāmanąm*; from which the -*n*- of the stem might easily replace the -*b*- of the case-ending, giving *nāmaniš*, = *nāmǝbīš*. Similarly, nom. *ašavanō*, acc. *ašāunō*, gen. *ašāunąm*, whence *ašāubiš* might be changed to *ašāuniš*. The orthography -*āu*- was even in the Gathas changing to -*ao*-, which is regular in the later Avesta: here we have the inst. pl. *ašaonīš*. A similar analogical substitution may easily be made in -*nt*- stems, for the instr. pl.*-adbiš* (as in *haδbīš*): nom.-acc. -*antō*, gen. -*antąm*, whence instr. -*antiš*. The quantity of the -*i*- in -*iš* is not determinable from the writing, which is erratic.

The acceptance of -*īš* as an ending of the instr. pl. in -*n*- stems in Iranian enables us to interpret two forms of the OP inscriptions. The one is *taumaniš* in *anuv* : *taumanišaiy*, NRb 26–6; see note above, ad loc. Although *anu* governs the acc. in the Avesta, and unmistakable genitives in NRb 16 and 18, there is no reason why it should not govern the instrumental also, as in Bh. 1.92; for in Iranian, as evidenced by usages in the Avesta, many prepositions govern more than one case.

A second OP instrumental in -*iš* is perhaps to be identified in *arašnis*, occurring twice in line 26 of the Record of Darius's Palace at Susa; the text is [*4*]*0* : *arašniš* : *baršnā* '40 cubits in depth (or height)', repeated with the numeral 20. The word *arašniš* (if it is so to be normalized) was compared by Scheil, Mem. de la Mission Arch. de Perse 21.26 (1929) with Av. *arǝθna-*, *frārāθni-* (AiW 196, 1021), Skt. *aratnáy-* 'elbow, cubit'. The form is cited by Benveniste, Gram.[2], as nom. sg. of an -*ī*- stem, §308; nom. sg. of an -*i*- stem, §318; acc. pl., §358 end. It must of course be plural, and might be acc., as an acc. of extent (so Benveniste, §358); but as yet we have found in OP no acc. pl. forms which differ from the nom. pl., except in enclitic pronouns which have no nom. The use of nom. *avaiy* 'they' as acc. in Bh. 2.77 and 4.69 strongly supports the view that where nom. pl. and acc. pl. differed in form, the acc. disappeared in OP and the nom. form assumed the acc. function also; so also *dahyāva* in Bh. 1.21,47,67 is a nom. in acc. function, whereas Av. has the normal acc. form *daiǫhuš*. Thus if *arašniš* is a form of the stem *arašni-*, we should expect an OP nom.-acc. *arašnaya*.

I therefore suggest that this is the instr. pl. of an -*n*- stem, from Iran. *aratan- araθn-*, becoming OP *arašn-* (for phonetics, see Tedesco,

BSLP 26.1.64; Benveniste, BSLP 30.1.58; Meillet, BSLP 30.3.87), whence by extension *arašan-*, in the strong grade of the suffix. Parallel extensions of the anteconsonantal value are seen in OP *xraθum* NRb 3, cf. Av. *xratav- xraθw-* (AiW 535); and in OP *gāθum gāθavā*, cf. Av. *gātav- gātu-* (AiW 517), Skt. *gātav-*. It is to be noted that the alleged Av. stem *arθna-* 'elbow' (AiW 196) occurs only once, Frahang 3 g, in the nom. dual *areθnå*, which may equally well be dual nom. of an *-n-* stem (Reichelt, ElB §334, second paragraph: *-å* extended from *-a-* stems).

Then *arašniš* is not acc. pl., but instr. pl. in *-iš*, and should be normalized *arašaniš*, with the vocalism of *taumaniš* (and of Av. *nāmǝnīš*). This interpretation is supported by the attachment of the word to a plural numeral: in the Bh. insc. the dates contain the word 'days' in the instr., if there is a plural numeral, even though the phrase is nom. in use; thus Bh. 1.89–90 *XXVI : raucabiš : θakatā : āha* '26 days had gone by', as contrasted with the nom. sg. in Bh. 3.8 *I : rauca : θakatam : āha* '1 day had gone by'.

FROM SAPIR'S DESK

INDO-EUROPEAN PREVOCALIC *s* IN MACEDONIAN

If it can be shown that IE prevocalic *s*, or rather initial *s* before vowels, and intervocalic *s*, became *h* in Macedonian, as it did in all Greek dialects, we would have one good reason to think that Macedonian was, if not a Greek dialect, as O. Hoffmann tried to show,[1] at least not merely an eastern Illyrian dialect that was somewhat hellenized, but a distinct IE branch that might be set midway between Greek and Illyrian.[2] It is therefore of interest that Schwyzer[3] quotes, apparently with approval, Hoffmann's equation of Macedonian ὸϝαν 'swine' with Lat. *suem*. He does not discuss Macedonian *h-* < IE *s-* but quotes the word to illustrate Macedonian interchange of *o* and *u*. However, if this equation is correct for *o* < IE *u*, it must also be correct for IE *s-* > *h-*. In fairness to the critical reader he might have added: first, that ὸϝαν is absolutely the only form that Hoffmann could muster for the alleged change of *s-* to *h-*; secondly, that in order to arrive at it, Hoffmann had to doubly emend the Hesychian gloss which he quotes. For what Hesychius (or rather our version of him) enters is not ὸϝαν but γοτάν. It seems proper to emend γ to ϝ in Hesychian glosses, when there is something to be gained, but for a theoretically archaic letter for *h-* (*hoϝαν in archetype) to show up as a corrupted γ- and a -ϝ- as a corrupted -τ- as well is beyond easy credence.

[1] See O. Hoffmann, Die Makedonen, ihre Sprache und ihr Volkstum 1906.

[2] We know that intervocalic *s* remained in Illyrian from such names as *Ísarcus* : Goth. *eisarn* (WP 1.4), Αὐσανκαλεί, *Ausancalione*, *Anausaro* (Hans Krahe, Die alten balkanillyrischen geographischen Namen 82, 1925) and *Vescleves-is* < IE **k̂lewes-* (WP 1.310). Many Illyrian names with initial prevocalic *s*, such as *Senta*, *Sextus*, *Sexticus*, *Sexto* (these last are almost certainly not Latin in origin), *Salvia*, have every appearance of possessing IE *s-* (see lists in Krahe, op. cit. and Lexikon altillyrischer Personennamen, 1929).

[3] See Edward Schwyzer, Griechische Grammatik, allgemeiner Teil and Lautlehre, 1934, digest of phonological evidence bearing on Macedonian, with literature, 69–71.

Schwyzer's use of this created word ὄϝαν is all the harder to understand as he quotes from Kretschmer what looks like rather satisfactory evidence that intervocalic IE -s- remained in Macedonian in its voiced form -z-, if -ʓ- can be so interpreted in ἄλιʓα 'Silberpappel : Span. *aliso* < Germanic, presumably Visigothic, **alisa* (cf. German *Erle*, OHG *elira* < WGerm **alizō*[4]). In other words, Schwyzer implies that IE s- before vowels becomes Macedonian h-, but that intervocalic -s- appears as Macedonian -z-. There is no logical reason why such might not be the case, but it seems to be against general experience in IE. In Latin and Umbrian IE s- remains but intervocalic -s- is rhotacized to -r-, via -z-. Similarly, in West and North Germanic initial IE s- remains but intervocalic -s-, when the stress did not immediately precede (Verner's law), became voiced to -z- > -r-. Again, in Old Irish IE s- remains (aside from lenition in sentence sandhi) but intervocalic -s- becomes -h- > -zero-[5]. The last instance is particularly instructive because it exactly reverses the supposed treatment of IE s in Macedonian. Such parallel instances still further weaken the force of Hoffmann's evidence. The existence of other Macedonian glosses with intervocalic -s- naturally proves nothing unless we can show that -s- is referable to IE -s-. Thus, Macedonian καυσία 'broad-brimmed felt hat'[6] almost certainly derives from an earlier **kauts-* (or **kaudz-*), i.e. **kaut-* (or **kaud-*) with final dental assibilated by originally following -y-; cf. Tokharian A *koc*, B *kauc* 'high, upward'[7] < pre-Tokh. **kaut-y-* (original **kaud-y-* would level to **kaut-y-* before further developing to **kauc-*). (The point of this comparison is contained in Hoffmann's description: 'die καυσία, wie unsere Filzhute, besass einen besonderen Kopfdeckel und eine nach oben gekrummten breiten Rand'.)

There is, further, a statistical argument which can be urged against Hoffmann. If we are to believe that IE prevocalic s- became Macedonian h-, there ought to be a fair sprinkling of initial '- in the some 140 Macedonian glosses we possess because of the great frequency of s- as an IE initial, regardless of whether we could etymologize such examples or not and allowing for textual corruption. Now, of the 36 Old Mace-

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[4] Schwyzer 69, note 3; and cf. WP 1. 151.

[5] See R. Thurneysen, Handbuch des Altirischen 79.

[6] Hoffmann, op. cit. 55-8, particularly 56.

[7] These Tokh. words are not immediately referable to Germanic **hauha-* 'high', though perhaps ultimately related. See G. S. Lane, Problems of Tocharian Phonology, LANGUAGE 14.26 [read **qou-q-* for **quo-q-*]. This is by no means an isolated example of special correspondence between Tokharian and Illyrian (including Macedonian), as I hope to show in detail at another time.

donian entries under α- in Hoffmann's monograph, not one has ἁ-,
all have ἀ-; but of 77 'Macedonian' names (borrowed from Greek or, if
genuinely Macedonian, given in our sources in Greek form), 7 have 'A-.
For New Macedonian[8] two cases in ἁ- are entered (ἀjάσμους and ἅλιος)
out of 4 in α-, but these, needless to say, are merely due to the ortho-
graphic conservatism of the Koinē throughout its history. Of 4 Old
Macedonian entries for ε-, one has ἑ, i.e. ἑταῖρος, almost obviously a
Greek loan-word; of 21 names, 5 have 'E-. Of 4 Old Macedonian entries
for ι-, none has ἱ-; of 6 names, 4 have 'I-, all in 'Ιππο-. There is one
Macedonian gloss in ἠ-, ἡμεροδρομας, again an obvious loanword, if only
because of η instead of ā; of 6 names, 5 have 'H-. There is no Macedo-
nian gloss in ὀ- and none in ὁ- unless we accept Hoffmann's emended
ὁϝαν; of 7 names, 1 has 'O-. There is one gloss in ὑ-, none in ὁ-; and one
name in 'Υ-. There is neither gloss nor name in ω-. In summary,
there is not a single example of a genuine Macedonian word beginning
with h-, quite aside from the problem of whether such words, if they
existed, owed their h- to IE s- or not. All this looks badly for Macedo-
nian 'ὁϝαν', which should obviously be restored to the original γοτάν of
our source, even if we can do nothing with the IE placement of this
word at present.

We have, then, no evidence whatever for a Macedonian treatment of
IE s which is parallel to its treatment in Greek, but some slight positive
evidence that IE s was preserved intervocalically as -z-. By analogical
inference we shall have to assume that it was preserved initially, even
though we cannot as yet give satisfactory etymologies of words with
prevocalic initial s- in Macedonian.[9]

THE INDO-EUROPEAN WORDS FOR 'TEAR'

It has proved difficult to reconcile the Indo-European words for
'tear', no less than four apparently incompatible formations being found,
illustrated by Skt. áśru, Lith. āšara, OHG trahan, and Greek δάκρυ
The last is generally taken as the point of departure—a fatal error, as
we shall see. The Hittite 'esḫaḫru[1], which it seems impossible to dis-

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[8] Present-day Macedonian Greek is a development of the Koinē but has a
number of interesting survivals of the old Macedonian language.

[9] See, e.g., genuine Macedonian personal names (Sabattaras, Sippas, Sirras) in
Krahe's material.

[1] I interpret such Hittite orthographies as e-eš- as meaning 'es-, i.e. glottal
stop + vowel + consonant. My reasons for this I hope to develop in a later
paper.

connect from the better known IE forms, only adds a fifth incompatible form to the confusion. Yet it is precisely this Hittite word which led me to an analysis of the whole family which I hope may seem as reasonable as it is unexpected.

Instead of first analyzing the various dialectic forms back to their respective prototypes I shall at once present the reconstructed complex of IE forms, interpret their formation and meaning, and then apply the schema to the material presented by the IE dialects. The reconstructed set of IE forms consists of a basic term (illustrated by Skt. *áśru*), an old collective of a peculiar type of reduplication (illustrated by Lith. *ašarà*), and two compounds in which the second element is the primary word for 'tear' or rather the old substantivized neuter adjective which had come to be used for 'tear' (illustrated by 1. OHG *trahan* and Gk. δάκρυ; 2. Hit. *'esḫaḫru*).

We shall assume:

1. $*xáḱru^2$ 'tear' (n.) < 'acrid'
2. $*xaḱxa(ḱ)r\text{-}áx$ 'tears' (reduplicated collective of 'feminine' form)
3. $*^wdr\text{-}xáḱru$ 'water' + 'acrid'
4. $*'ésxṇ\text{-}xḱru$ 'blood' (= 'effluvium') + 'acrid'

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[2] In this and subsequent papers on IE phonology I reconstruct in terms of the four IE 'laryngeal' consonants: ' = glottal stop with fronted timbre (*ʔe- = usual *e-; tautosyllabic *-e' = usual -ē, not to be confused with *ē = usual *ē when lengthened grade of e); ʔ = glottal stop with velar timbre (*ʔa- = usual *a-; tautosyllabic *-aʔ = usual -ā, not to be confused with *ʔā = usual *ā when lengthened grade of ʔa); x = velar voiceless spirant (*xa- = usual *a-; tautosyllabic *-ax = usual *-ā, not to be confused with *xā = usual *ā when lengthened grade of xa); γ- = velar voiced spirant (*γ- = usual *o- [*ð-], not to be confused with *'o-, *ʔo-, *xo-, *γo-, = usual *o-, respective o-grades of *'e-, *ʔa-, *xa-, *γọ-, = usual *e-, *a-, *a-, *o- [ð-]; tautosyllabic *-eγ = usual *-ō, not to be confused with *γọ = usual *ō when lengthened grade of γọ, nor with *'ŏ, *ʔō, *xŏ, *γŏ, = usual *ō when lengthened o-grades of *'e, ʔa, xa, γọ). Certain ambiguities of reconstruction make it necessary to use cover-symbols; A = any 'laryngeal'; A = ʔ or x, causing a-timbre. In this system there is no place for ə, ī, ū, m̥, n̥, l̥, r̥. These correspond to ₒA (= ₒ', ₒʔ, ₒx, ₒγ), iA (or yₒA), uA (or wₒA), m̥A (or mₒA), n̥A (or nₒA), l̥A (or lₒA), r̥A (or rₒA). Properly speaking, i and u should be expressed as y and w̥. Better yet, all cases of 'i', 'u', 'm̥', 'n̥', 'l̥', and 'r̥' should be analyzed as ₒy or yₒ, ₒw or wₒ, ₒm or mₒ, ₒn or nₒ, ₒl or lₒ, ₒr or rₒ, according to whether they are reduction products of ey or ye, ew, or we, em or me, en or ne, el or le, er or re, while i (or y), u (or w̥), m̥, n̥, l̥ and r̥ might be reserved as cover-symbols for those cases in which our evidence does not allow us to choose between type ₒy and type yₒ. Much neater than such orthographies as ₒy, y (or i) and yₒ would be ₒy, y, yₒ, in which ₒ is a symbol for schwa (murmur-vowel) and syllabification of semivowels, nasals, and liquids at one and the same time, an identification that seems pho-

1. The word *xákru, which now looks like an ordinary neuter substantive *u*-stem, is best interpreted as an old dualized neuter in *-u* (= -*ₑw*), which is doubtless identical with the *-w* of masculine and neuter nom.-acc. duals in *-ōu*.   Such petrified duals are not uncommon in Indo-European, e.g. *ĝón-u 'knee', Goth. *hand-u-* 'hand', Goth. *fōt-u-* 'foot'.   The dualic *-u* of *xákr-u may refer to the two eyes. Whether the parallel form in *xakr-ó-m (e.g. Skt. *aśrá-m*) is the corresponding non-dualized thematic singular or is merely a relatively late transfer from the less common *u*-stem class to the more common *-e/o*-stem class is not clear.   Either alternative is possible.   The latter would seem to be the more acceptable one, but there is a similar parallelism in forms of group 3 (e.g. Gk. δάκρυ: OIr. *dér* and Goth. *tagr* < *dákrom and *dakróm) and in Lettish and Lithuanian, whose *u*-stems are particularly common, we nevertheless have a Balto-Slavic *ā*-stem, which is the

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nemically sound for Indo-European. The true IE vowels, according to the proposed system, are therefore:
- A. Full grade
  1. *e*-type: *e, a, ǫ*
  2. *o*-type: *o*
- B. Lengthened grade
  1. *ē, ā, ǭ*
  2. *o*-type: *ō*
- C. Reduced grade
  1. Syllabic: *ₑ*
  2. Non-syllabic: *zero*

Most Indo-Europeanists will find it awkward, at first, to think from such accepted entities as *dhē- and *wī- (*yī-) to *dhe'- and *wₑyA- or *wyₑA- or *wyA-, but in the long run they will, I believe, be surprised to find how much more regular, simple, and phonologically satisfactory the new system is than the old. It may be added, by way of preliminary justification of the proposed reconstructive orthography, that IE *x* actually occurs in Hittite as *ḫ* (= *ḫ₁*) and, under certain circumstances, in Phrygian-Armenian (e.g., as Phrygian *-k* in βονό-κ 'woman' < *gʷ,ná-x = *gʷ,n-á̄; Arm. *x* in, e.g., *sxalem* 'I go wrong, wander', Skt. *skhalatē* 'he stumbles, goes wrong', Gk. σφάλλομαι 'I stumble, go wrong' < IE *skʷxal-, an *e*-grade base) and that IE *γ* occurs in Hittite as *ḫ* (= *ḫ₂*) and, after nasals, as *-k*- (I shall return to this at a later time), is preserved in Armenian under certain definable circumstances as *-k*- (IE *γ* and *g, gʷ* probably leveled to *g* and shifted to *k*), and, when not initial, seems regularly preserved in Tokharian as *-k*-. The other two 'laryngeal' phonemes, ' and *ꜣ*, are not so directly demonstrable but, in the long run, are just as inescapable. It was necessary to go into this long, and certainly not completely satisfying, preliminary statement because otherwise the schema of IE words for 'tear' can not be presented with due symmetry.

normal feminine pendant to the masc.-neut. -*e/o*-stem. The word
*xáḱru and perhaps *xaḱróm as well are best explained as neuter forms
of the common IE adjective **xaḱré/o*- 'sharp, acrid' (cf. Lat. *ácer*,
acer-bus, Lith. *aštrùs*), as has been pointed out a number of times.[3]
**wédr̥* (or *w₀dór, *wodór) *xáḱru* (or *xaḱróm*) 'water acrid' was the
original IE term for 'tear'. Perhaps, when the noun was specifically
named, it was **wedr̥ xaḱróm* 'water acrid' (n.) but *xáḱru 'the dually
acrid (n., sc. water)' when the noun was implicit. At any rate, *xáḱru
must have been early petrified into the common word for 'tear', for it is
presupposed by many of the compounds in groups 3 and 4.

2. The Balto-Slavic forms are obviously closely related to the Indo-
Iranian and Tokharian ones, yet Lith. *ãšara* (*ašarà*, according to
Kurschat[4]) and Lettish *asara* are not derivable from the base *xaḱr- of
group 1. The second *a*-vowel of the Baltic forms is in no way a second-
ary element due to the consonant group *-*šr*- < *-*ḱr*-, for Lith. -*šr*-
either remains or introduces a glide -*t*-, hence *ašrùs* or *aštrùs*.[5] Nor
has -*a*- been established as a Baltic development of ₑ reduced from *a*
in open syllables (our *xa*, ʔ*a*); -ₑ- seems consistently to yield -*i*- before
r or *l* + vowel.[6] -*arà* could be plausibly interpreted as a Baltic transfer
of an old neuter to the feminine and the -*ar*- as a resulting assimilation

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[3] See, e.g., Walde-Pokorny 1.769 sub *daḱru*. See also E. Sapir, On the Etymo-
logy of Sanskrit *áśru*, Avestan *asru*, Greek *dákru* in Spiegel Memorial Volume
156–9, Bombay, 1908. The present paper supplements and in large part corrects
my earlier one. The interpretation there proposed of *dáḱru as 'biting (water)'
(cf. Gk. δάκνω) is untenable because 'to bite' is IE *denḱ- (Gk. δάκ-νω < **dn̥ḱ*-),
to which *dak*- of *dáḱru* is unrelated. This was pointed out to me years ago by
Professor R. G. Kent.

[4] See Trautmann, *Baltisch-Slavisches Wörterbuch*, s.v. *ašarā*- (14). *ašarà* is
the more archaic form accentually and *ãšara* is obviously due to leveling, in
certain Lithuanian dialects, with those case forms, e.g. dat. *ãšarai*, in which the
originally oxytone accent was transferred to the first syllable because of certain
accent-shifting processes peculiar to Baltic in general or to Lithuanian in par-
ticular. The word is listed by Wiedemann, Handbuch der Litauischen Sprache
261, as a circumflected proparoxytone with invariable stress (his class 4, of circum-
flected sub-type); see also 47. For the original oxytonesis of feminine -*ā*-stems
of three-syllabled words see T. Torbiörnsson, Die litauischen Akzentverschieb-
ungen und der litauische Verbalakzent (Slavica 9, pp. 12 [type *ašakà*], 47–8, 53
Heidelberg, 1924); H. Hirt, Indogermanische Grammatik 5.257–60; J. Kurylowicz,
Le Problème des Intonations Balto-Slaves (Rocznik Slawistyczny 10.56–59
[1930]).

[5] See Brugmann, Grundr.[2] 1. §627.

[6] Op. cit. §522, 1; also Hirt, Indogermanische Grammatik, 2. 85, 86.

of an older -er- to the new ending,[7] were it not that old neuters generally become Baltic masculines (e.g. Lith. *medùs* : Skt. *mádhu*; Lith. *árklas* : Gk. ἄροτρον),[8] that there is no *-ero-, *-erā formation for 'tear' quotable from any other IE dialect,[9] and that there are plenty of substantive *u*-stems, old and new, in Baltic.   Neither an IE *xak̂or-' nor an IE *xak̂ǝr-' (our *xak̂ₑAr-') is thinkable; the former corresponds to no obvious ablaut pattern, the latter would have yielded a Lith. *ašrà, dat. *ášrai (cf. Lith. *galvà* 'head', dat. *gálvai* < IE *ghol̥xw-áx, cf. Armenian *glux* < IE *ghl̥xw-ó-).   There seems nothing left but to interpret the Baltic -a- as an IE -a-, i.e. -xa- (or -ʔa-), and to reconstruct to *xak̂xar-áx, an example of 'broken' reduplication (for fully reduplicated *xak̂xak̂-rá-x, collective 'feminine' of *xak̂xak̂-ró-), the -ro- suffix favoring adaptation to such freely reduplicated models as Lat. *querquerus*, Gk. βάρβαρος, Gk. ὅλολυς.   Possibly the loss of the second -k̂- (Baltic -š-) was a Baltic, not Indo-European, process: *xak̂xak̂ráx 'many-tears-collectivity, flow of tears' (cf. Gk. ὅλολυς 'howler, effeminate man') > Baltic *ašašrà > Lith. *ašarà*, Lettish *asara*.[10]

3. Our reconstruction for types 3 and 4 assumes that the underlying IE forms are compounds of *wédr̥ 'water' (represented by Tokh. *wär*, Arm. *get* 'river', Phrygian βέδυ) or other ablauting form (e.g. Goth. *watō*, Hit. *watar*, *weten-as*, OChSl. *voda*; Gk. ὕδωρ), in its most reduced form *ʷdr-, and of *'ésxn̥- 'blood, effluvium' respectively with the *xák̂ru, *xak̂rom discussed under 1.   *ʷdr-xák̂ru 'water-acrid' represents simply a more synthetic method of expressing *xák̂ru, i.e. *wédr̥ xak̂ru,

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[7] For Baltic -aras, -ara for original *-eras, *era, see Brugmann, op. cit., 2. 1. 357 and 1. 238, also Wiedemann, Handbuch der litauischen Sprache §59, 1, and Endzelin, Lettische Grammatik §167.

[8] One might, of course, say that the expected Lith. *āš(t)rus* could not hold its own because it would have conflicted with the nearly homonymous adjective *aš(t)rùs* 'sharp', hence a transfer to a fem. *aš(t)rà* and subsequent assimilation in form to the common type -arà.   All of which sounds a little made to order and far from plausible in view of the obvious antiquity of the word and the specific formal agreement of Lithuanian and Lettish.

[9] Note that in the apparently analogous Lith, *vākaras* 'evening' we deal with a genuine IE form in *-ero- (cf. OChSl. *večerъ*, Lat. *vesper*, -er-is, -er-ī, Gk. ἕσπερος; there can be no reasonable doubt, in spite of apparent difficulties, that these all belong together).

[10] For examples of such fully reduplicated and secondary broken forms in Indo-European see Brugmann, op. cit. 2. 1, §§70-74; Hirt, op. cit. 4. 6-9.   There is, instead, a possibility of connecting the Baltic words and, less plausibly, the Slavic words for 'tear' with the Hittite form.   See 4 below.

itself.   *^{w}dr-xáḱru 'the water-acrid' is, roughly speaking, to the analytic *wédr̥ xaḱru 'water which is acrid' what such a Greek form as εὐ-πάτωρ 'the good-father' is to the analytic ἐὺς πατήρ 'a good father'.   Ordinarily the reduced form of a syllable of type we- would by a syllabic w, i.e. w₌-, u- (e.g. Gk. ὕδωρ, Skt. uda-ká-m) but we may suppose that in compounds in which the first element, 'water', was no longer felt in its literal meaning the phonetic groups *wdr-', possibly also *wdén-, *wdér-, would reduce to *dr-' (*dén-, *dér-).[11]

It would seem that there are several forms with dr-, reduced from *^{w}dr- 'water', besides *dr-xáḱru 'tear.' Among them are:

(1) Gk. δροίτη 'wooden tub, bath-tub; coffin' < *dró-sitā < *^{w}dr-ó-sitā 'water-tub, water-vat' (cf. Lat. dim. situla 'little tub', i.e. 'bucket, pail').[12]

(2) Gk. δρόσος 'dew; pure-water, tears' < *^{w}dr-ó-k^{w}yos 'water-row', i.e. 'row of water-drops' (*-k^{w}yo-, thematized zero grade of *k^{w}ey-, *k^{w}oy- 'to arrange in rows', W.-P., 1.509).

(3) Gk. δρίλακες· βδέλλαι [leeches]. Ἠλεῖοι (Hesych.).   This extremely obscure Elean word receives a simple interpretation on our hypothesis. It is to be analyzed as *^{w}drí-lak-es '(worms) stepped on in the water' (*^{w}dri, an old consonant-stem locative; -lak- : Gk. λάξ, λάγ-δην 'with the heel', λαχ-μός < *lak-smó-s 'a kick'[13]).

[11] There is no reason to think that reductions of etymologically nontransparent elements in compounds would be mechanically identical in form with reductions of morphologically parallel elements when uncompounded.   Contrast, in English, board and -board of cupboard, wife and -y of hussy < hūs-wíf. It is, therefore, perfectly conceivable and even probable that w and y, and very likely still other consonant-phonemes, might disappear in Indo-European (or dialectically) when found in semantically obscure syllables immediately before other consonants. That no one has as yet formulated a phonetic law which would allow an old '*wdr-' to simplify to *dr-' in certain cases and an old *w₌dr-, in apparently parallel instances, to maintain itself as *udr- merely means that the more intricate reduction processes of Indo-European are still in the main to be unraveled.   A parallel case is probably that of IE *snusú-s 'daughter-in-law', in which many have felt that *snu- represents a hyper-reduced form of *sunu- 'son', in our terms an old *s^{w}nu-', which lost its -w- largely because in an untransparent compound of this type non-syllabic semivowels caught between consonants might be expected to drop out without a trace.

[12] This simple etymology seems preferable to those based on a supposed *drou- or *drow- 'wood, oak', with unlikely ablaut-form of first element. See Boisacq, Dict. étym. de la Langue Grecque, s.v. δροίτη; Walde-Pokorny 1. 804.

[13] See Boisacq, s.v. λάξ, for other words belonging to this group. The resemblance of δρίλακες to δρῖλος 'earth-worm' can hardly be other than fortuitous.

(4) MIr. *drochta* 'vat, tub', *dro-chat* 'bridge'[14] < *[w]dro-* 'water' + second element of compounds, of type 'container' and 'cross-pole, cross-log' respectively. MIr. *-chta*, a depalatalized *-yo-* or *-yā-* stem[15], say *-kat-yā-*, is perhaps to be grouped with Lat. *catī-nu-s* 'basin'; *-chat* (read — *add*) reconstructs to *-kant-o-*[16], cf. perhaps Gk. κοντός 'pole, shaft of pike' (*-o-* of post-accentual syllables becomes OIr. *-a-*). These analyses are necessarily uncertain, but 'water'؛seems a better mediating term between 'tub' and 'bridge' than 'wood'. One cannot but suspect that etymologists presuppose too great an emphasis on the wood of all manner of artifacts that could never have been made of anything else.

(5) Germ. *troga-* 'trough' (OHG *trog* m., MHG *troc, trog-* m., German *Trog*, AS *trog, troh* m., Eng. *trough*, Dutch *trog*, ON *trog* n.), *trugjō* (LG *trügge*)[17] < *[w]dr-uĝh-yā̆* 'water-conductor', originally perhaps, a V-shaped construction—of wood— in which the water is run for the animals; *-uĝh-*, reduced from *weĝh-*, as in Albanian *uδ-* (*uδ-ε* 'way'; *urε* 'bridge' < *uδ-rā* < *uĝh-rā̆*).[18]

(6) Skt. *dróṇa* (m., n.) 'trough, tub', (m.) 'kind of cloud abounding in water (like a trough)', *druṇī* 'water-bucket'[19] < *[w]dr-ó-wn-o-, *[w]dr-un-ī* 'water-wood, water-trough', *-wn-* and *-un-* being reduced from *wen-* of Skt. *ván-a-m* 'tree; wood (RV.); wooden trough for Soma (RV.)'.[20]

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[14] See Walde-Pokorny 1. 805. There seems no warrant for the '*hölzernes' in his rendering of *drochta* except a natural desire to connect the word with the well-known IE set of words for 'tree, wood'.

[15] See Thurneysen, Handbuch des Altirischen §§165; 281, 282; 292. *-a* < OIr. *-(a)e*.

[16] See Pedersen, Vergleichende Grammatik der keltischen Sprachen 2. 47. Pedersen suggests an analysis into *druk-anto-* 'wood' (of aberrant form in *-k-*) + formative element *-anto-* of unknown meaning = 'beam' > 'bridge'. A 'log' (or 'pole') thrown over the water would seem to come a little nearer to yielding the desired 'bridge'.

[17] See Walde-Pokorny 1. 806 and, far more clearly, Kluge, Etymologisches Wörterbuch der deutschen Sprache s.vv. *Trog* and *Truhe* ('chest'). Walde-Pokorny throw together a whole group of words that cannot possibly have anything to do with each other: 'fest, kräftig, gesund; Trog; Kiste, Truhe; eine Art Saum- oder Packsattel; eine Art Fischkorb; Hartriegel', all supposed derivatives of IE *dru-* 'tree, wood'. This is purely verbal etymologizing, without regard to cultural probability, at its worst. Even Kluge, who is more factual in such matters, remarks, sub *Trog*: 'vorgerm. *dru-kó-*, das man mit Recht aus dem unter *Teer* behandelten idg. Stamme *dru* (*dreu deru*) "Baum, Holz" ableitet; vgl. skr. *dru dáru* "Holz": *Trog* also eigentlich "Hölzernes"?'

[18] See Walde-Pokorny 1. 249.

[19] Referred by Walde-Pokorny 1. 804, to *dru-* 'wood'.

[20] Cf. Grassmann, Worterbuch zum Rig-Veda, s.v. *vána* n., 9.

(7) Skt. *drapsá* (m.) 'drop' < *^{w}dr-ops-ó-*, an archaic bahuvrihi compound with oxytone thematic suffix (*-ó-*) and reduced grade of second syllable of second element of compound (IE *$ópos$* 'work': *-ops-ó-* like *wétos* 'year' : *tri-wets-ó-* '3-yeared', Skt. *tri-vats-á-*[21]), 'water-worked, water-charactered, water-like'. The meaning of the element *-ops-* may have been rather that of 'property' (as in Skt. *ápnas* n., Lat. *ops, op-is*): 'water-propertied, having (some) water'.

No doubt other examples of IE *dr-* < *wdr-* 'water' can be found but these will suffice. There is some reason to think that the ablaut-type zero + *e* (*wder-*, *wden-*) might also lose the *w-* if this element was compounded with a following stressed element. Such a *den-* 'water' < *^{w}den-* seems to be found in:

(8) Gk. (Epid.) δενδρύω 'to dive' < *^{w}den-*.

[At this point Sapir's manuscript ends. Apparently he would have discussed the dissimilative loss of the first *r* in Gk δάκρυ, OHG *zahar*, etc., and a brief note suggests that in his opinion Lat. *lacrima* should be traced to *dlakru-*, no doubt with *l* for *r* by dissimilation.

Then would have followed a justification of his derivation of Hitt. *'esḫaḫru* (*e-eš-ḫa-aḫ-ru*) from IE *$'ésxn-xḱru$* 'blood acrid' or rather 'effluvium-acrid.' One sees clearly enough what the general course of the argument would have been; but it seems safer to leave its reconstruction to the reader. E. H. STURTEVANT.]

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[21] See Wackernagel, Altindische Grammatik 2.1. 109, 110.

MISCELLANEA

HITTITE ḫa-aš-ša ḫa-an-za-aš-ša

Sturtevant (Grammar §184) sees in the -a of *hasa hanzasa* 'grandchild (and) great-grandchild' a dual (-*a* < -*ō*); Milewski (L'indo-hittite 32) explains *hanzasa* as a compound of *ha-aš-ša* with *hanz*[1] (*hanza* 'front'; *hanti* 'in front, before, separately'[2]).   As Pedersen is not certain whether one is to expect a 'devant' 'als erstes Glied von Urenkel', one may call attention to a certain type of Indo-European kinship names which use a preposition with a suffix -*t(i)i̯o*-: Gothic *niþjis* 'Verwandter; alles, was innerhalb des Haus-, Sippen-, Stammesverbandes steht'; OE *niþþas* 'Männer, Menschen'; Skt. *ni-tya-*[3] 'eigen' (W. Schulze, Kleine Schriften 69 ff.), where *ni* belongs to ἐνί[4] (Schulze, ib.); Gothic *framaþeis* 'fremd' (Skt. *sánutya-* 'fern seiend' [Whitney, Skt. Gram. §1245]); Skt. *amā́-tya-* 'Hausgenosse, Angehöriger' (*amā́-* 'daheim, zu Hause'); *niṣṭya-* 'Auswärtiger, Fremder' (*niḥ* 'hinaus'); Lith. *svēčias* (< **si̯e-ti̯a-s*) 'Gast', originally 'Fremder' (compare Lith. *svētimas* 'fremd', probably belonging with Greek ἑκάς, [Hesych.] βεκάς < **si̯e-kás* 'für sich, einzeln' [J. Schmidt, Neutra 343], and also (?) with **sĕ-* in Latin *solvō socors, sēd* [W. Schulze, ib.]); Skt. *ápatya-* n. 'offspring, child, young (of animals)', connected with *ápa* prep. 'away, forth, off'.   In general these words have the meaning 'those of the house' or 'the remote ones, those who are away'.

If one takes the IE formations as a basis for judgment, one would expect for *hanzasa* nothing but a derivation corresponding to Skt. -*tya-* from *hant-* (or *han-*); taking into account the meaning of the IE words of this formation, one presupposes for *han-* or *hant-* something like the meaning 'away' (compare Skt. *apa*), which would go with *hanti* 'separately' and also with *hanessuwar* 'fragments trimmed from a wall' (*haness-* 'clean, trim' ?).

[1] According to H. Pedersen, Hittitisch und die anderen indoeuropäischen Sprachen 34 (København, 1938).

[2] E. H. Sturtevant, Hittite Glossary[2] 42.

[3] Compare Skt. *ni-tya-* and *ni-ja-*, *Goth. ni-þjis* and *innakunds, frama-þeis* and OE *feor-cund*, Skt. *ápa-tya-*, Greek ἀπόγονος.   Also Goth. *au-þja-* 'abgelegen', with the same *au-* as in Latin *auferō, aufugiō*, shows the suffix **tio-*.

[4] *ni* : ἐνί = Skt. *pidhā́nam* : Greek ἐπίθημα.

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After these general considerations which seem to lay the foundation for an explanation of *hanzasa*, there remain difficulties as to the element from which *hanzasa* is derived: Is it (a) *han* (: *hanessuwar*, or *han-* ; *hant-* : *hanessuwar*), or (b) *hant*, *hanti* ? *Han* + **-tio-* may develop into a Hittite **hanza-*. However, it is not certain that *hanti* + **-tio-* would result in the same form, **hanza-*. Lohmann[5] made it probable that a *hanti* + **-tio-*, which he considers an analogous formation, would become **hantezzi-s* (or **hantezzi-ia-aš*); this **hantezzis* shows the same formation as *appizis* 'der letzte, hinterste, hintere', *sarāzzis* 'superior' (: *sarā*), and *sanizzis* 'vorzüglich hervorragend, gut' (: **sani-*, OIr. *sain-*). It is possible that *hant-*[6] + **-tio-* would yield a form *hanz-*[7]. *Han* and *hant* may be connected from an IE point of view: *han-* may have the same relation to *hant-* as Skt. *ápara-* 'hinterer, späterer, zweiter', Goth. **afar* 'nachher', OE *eafora* 'ἀπόγονος' to Goth. *aftaro*, *aftra*, (*aftuma*), Skt. *apataram* 'ferner, abseits', or Goth. *unsar* to Lat. *noster*, Greek ἡμέτερος or Av. *hanarə* 'fern von, ohne' to Goth. *sundro* 'abgesondert, beiseite'.[8] *Hanza-* might then be the old formation beside a later analogous *hantezzis*.

It is hard to find an explanation for the *-s-* in *hanzasa*. Is it an element to point out a contrast,[9] like *-i-*, *-io-*, or those formations which developed into IE comparatives and superlatives?

The 'great-grandson' would then be the 'one who is away (= separated) from the kin'[10]; the words for 'grandson' and 'kin' seem to be closely connected in Hittite: *hassas* 'grandson' can hardly be separated from *hassana-* 'family', *has(s)ātār* 'reproduction, kin, family'.

<div align="right">FRITZ MEZGER</div>

THE ACCENTUATION OF LITHUANIAN -ybe

In the Lithuanian-German Dictionary (Wörterbuch der litauischen Schriftsprache by Max Niedermann, Alfred Senn, and Franz Brender),

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[5] IF 51.319-28; Professor E. H. Sturtevant was kind enough to point out to me the importance of this article.

[6] We may assume the existence of *hant* beside *hanti*; *hanti* : *han* = ἐνί : ἐν = ὄπιθεν : Goth. *af-tuma* = περί : Aeolic-Doric πέρ (Schulze, ib.).

[7] Sturtevant, Hit. Gram. 126.

[8] Lohmann, l.c.; Brugmann, Grdr.[2] 2.1.323 ff.

[9] A connection with the *-s-* of the comparative (Brugmann, op. cit. 547) cannot at the present state of our knowledge be maintained.

[10] See also Brugmann, Grdr.[2] 2.1.324: ai. *vitarám* Adv. 'weiter, ferner', av. *vītara-* 'der weitere, spätere', ὄιθρα d.i. *viθra* Adv. 'besonders, getrennt', got. *wiþra* 'gegen, wider' aus ai. *vi* 'hinweg, auseinander'; hierher vermutlich lat. *vitricus* 'Stiefvater' (der entferntere Vater, alter parens).

where I am responsible for the entire accentuation, the compounds in
-*ybė* are marked with a circumflex on the penult and are thus assigned to
accent-class 2. An exception is made for *lygybė* 'equality' which is given
in two different forms, namely, *lýgybė* and *lygýbė*, both belonging to
accent-class 1. In contrast to my accentuation-practice, Pranas
Skardžius, Bendrinės lietuvių kalbos kirčiavimas 18 (Kaunas 1936), gives
acute intonation for this suffix in all of its occurrences and thus assigns
it to accent-class 1, e.g., *daugýbė* 'multitude', *gyvýbė* 'life', *piktýbė*
'maliciousness'. For an explanation of this divergence I wish to refer
to my own Lithuanian Grammar (Kleine litauische Sprachlehre 244,
Heidelberg 1929). There I stated that in the specific dialect from which
the standard language developed, i.e., West High Lithuanian, the
suffix -*ybė* is pronounced with circumflex intonation (-*ỹbė*), while in all the
other dialects we find -*ýbė* with acute intonation. The Western variety
of High Lithuanian was used as the basis for the modern Lithuanian
standard language, because, when some 50 years ago a rejuvenation of
the Lithuanian language came in the wake of the national revival, most
of its leaders happened to have their roots principally in the northern
part of the province of Suwalki, which is situated west of the Niemen
river. From there, for instance, came Kudirka, the author of the
Lithuanian national anthem, Dr. Basanavičius, 'the father of modern
Lithuania', and Jonas Jablonskis, 'the father of the Lithuanian lan-
guage'. It was Jablonskis who laid down the rules for the new standard
language. His task was facilitated by the fact that in the neighboring
Prussian-Lithuanian districts, in so-called Lithuania Minor, there
already existed a grammar and a dictionary, both written by the Prus-
sian-Lithuanian Friedrich Kurschat. At the outset Jablonskis was
primarily concerned with grammatical correctness, purity of vocabulary,
and questions of syntax, paying little or no attention to normalization of
accent. In most cases Kurschat's accentuation was identical with his
own, and since Kurschat accented the suffix -*ybė* with circumflex intona-
tion (e.g., *galỹbė*, *gėrỹbė*, *gilỹbė*, *grožỹbė*, *kaltỹbė*, *lygỹbė*), this accentuation
was prescribed by Jablonskis for the standard language. However,
when entrusted by the Russian Academy of Sciences with editing the
second part of volume I of Juškevič's Lithuanian-Russian Dictionary
(Litovskij slovarĭ, St. Petersburg 1904), Jablonskis had to follow the
original manuscript which in all cases in question showed an absence of
accent-shift, thus assigning the words to accent-class 1, for Juškevič had
come from a territory where the suffix -*ybė* has acute intonation. Thus
we find the words *gailýbe*, *galýbe*, *gerýbe*, *gilýbe*, *girtenýbe*, *gývýbe* (i.e.,

both *gývybe* and *gyvýbe*), *gražýbė*, *grynýbe*, *grožýbe* in the text edited by
Jablonskis. However where the editor was allowed to have his own
say, Jablonskis remarks (703) that in the province of Suwalki,
where people say *gerỹbė* 'goodness, kindness', *gražỹbė* 'beauty', *dorỹbė*
'moral goodness', *piktỹbė* (synonyms for *gerùmas*, *gražùmas*, *dorùmas*,
piktùmas), the pluralia tantum *gérýbés* 'wealth, riches' and *grožýbés*
'beautiful things' also occur. Juškevič's Dictionary 2.1–276 (published
in 1922) was edited by Casimir Būga who was allowed more freedom
than Jablonskis. But here too we find only acute intonation, e.g.,
kaltýbė 'guilt', *kiekýbė* 'quantity', *kokýbė* 'quality'. This is under-
standable, since Būga came from Eastern High Lithuania. However,
in his own Lithuanian Dictionary (Lietuvių kalbos žodynas) of which
only two instalments appeared, the second one after the author's death
(1924), Būga heeded the demands for normalization issued by his older
colleague Jablonskis. As a rule he registered all the words with the
accent of the dialect from which they were taken, but gave clear promi-
nence to the West High Lithuanian dialect, with which he was well
acquainted through his wife, a native of Naumiestis. Thus he gives
aklỹbė 'blindness' with a circumflex, stating that it occurs in this form in
Kurschat's Dictionary and at Naumiestis, adding, further, that in the
Samogitian (Low Lithuanian) dialects the word is pronounced *aklýbė*.
Similarly arranged are *alkenỹbė*, *abejutỹbė*, *abipusỹbė*, *ainỹbė*, *aiškỹbė*,
aitrỹbė, *akylỹbė*, *akiplėšỹbė*, *amžinỹbė*. In most instances the form with
the circumflex sign is simply put at the head of the article, followed by a
remark given in parenthesis to the effect that -*ýbė* is the form used in
Samogitian and East High Lithuanian. Less amenable than Būga was
Ignas Šlapelis, another 'Easterner', whose Lithuanian-Russian Dic-
tionary is primarily based on Juškevič, and who, furthermore, was less
exposed to the authoritarian influence of Jablonskis, since he lived in
Wilna, i.e., outside of Lithuania.

For the accentuation in our Lithuanian-German Dictionary and my
Lithuanian Grammar, I was advised first by Būga and then from 1924 to
1929 by Jablonskis. It was Jablonskis' opinion that, wherever possible,
the accentuation of his native dialect must be accepted as the norm for
the standard language. And at that time Jablonskis' decision settled
the matter, for everybody accepted his authority, students and uni-
versity professors, as well as the entire Ministry of Public Instruction
with the entire school system of the state. Conscious of his mission,
Jablonskis gave us all his time (without any remuneration), arranging
special classes for students and professors, state employes and free-lance

writers. Those of us who were not native Lithuanians or not born with a reliable Lithuanian dialect relied completely on him. But we were sometimes thrown into embarrassing situations because our mentor in his later years made several changes, trying to do justice to the steadily increasing number of writers and scholars coming either from Samogitia or from Eastern High Lithuania. Thus, the American Lithuanian Vikt. Kamantauskas in his textbook on Lithuanian accentuation Trumpas lietuvių kalbos kirčio žodynas 2.4 (1929), prescribed circumflex intonation for the suffix *-ybė* (*-ỹbė*), allowing *-ýbė* as a dialect pronunciation. In this, Kamantauskas was in complete agreement with the theory given in my grammar and applied in our Lithuanian-German Dictionary. Even Skardžius at that time still prescribed circumflex intonation, as can be seen from Vikt. Kamantauskas, Kirčiuota lietuvių literatūros chrestomatija (1929), where Skardžius checked on all the accents (cf. *skaistýbę* and *gilỹbę* on page 216). But B. Sereiskij, a regular pupil of Jablonskis, whose right hand and secretary he was for a while, published a Lithuanian Grammar in Russian (Sistematičeskoje rukovodstvo k izučeniju litovskovo jazyka; Kaunas 1929), in which he introduced (vi) several distinctions in the treatment of the suffix *-ybė*: *biaurỹbė, aplinkỹbė, dorỹbė, valstỹbė, vyriausỹbė*; but *brangenýbė, retenýbė, sunkenýbė*; and *výrybė, lýgybė, gėrýbė*.

Sereiskij's rules were adopted in a somewhat simplified form by two Lithuanians, namely, P. Būtėnas (also a pupil of Jablonskis) and J. Baronas. P. Būtėnas, Lietuvių kalbos akcentologijos vadovėlis (1931), gives *-ỹbė* (108): *artỹbė, bjaurỹbė, būtỹbė, daugỹbė, galỹbė, gėrỹbė, gyvỹbė, piktỹbė, sunkỹbė, teisỹbė, vienỹbė, vyresnỹbė, vyriausỹbė*; but *-enýbė* (104): *baisenýbė, kartenýbė, retenýbė, senenýbė, sunkenýbė, šventenýbė, tikrenýbė, viršenýbė*. The same distribution is observed by J. Baronas in the second edition of his Russian-Lithuanian Dictionary (Rusų Lietuvių Žodynas, 1932), where simple *-ybė* is consistently marked with a circumflex (e.g., *gražỹbė* 215; *galỹbė* 247,251,512; *stiprỹbė* 512; *šviesỹbė* 513), while *-enybė* is given acute intonation (e.g., *šventenýbė* 507; *baisenýbė* 615).

Jablonskis' authority as the language teacher of the nation and the predominance of the Western dialect began to totter soon after his death which occurred in 1930. None of the younger Lithuanian grammarians is from the limited area whose dialect served as the model for the veterans. Balčikonis, Skardžius, and Butėnas are Easterners, Salys and Talmantas are Samogitians, and Dabušis is a Southerner from the country called Dzūkija. They all pronounce *-ýbė* in their native dialects. In addition, most of the Lithuanian authors who wrote poetry

used the form *-ýbė* in their verses, forming the instrumental singular in *-ýbe* instead of *-ybė* and the accusative plural in *-ýbes* instead of *-ybès*. Under these circumstances it was the natural thing for Skardžius to simplify the rules and to require acute intonation for both *-enybė* and simple *-ybė*.

This new rule has already been adopted in later textbooks, e.g., in the collective publication Lietuvių kalbos rašybos vadovėlis (Kaunas 1938) by A. Kalnius, Z. Kuzmickis, J. Talmantas and in Lietuvių kalbos gramatika by the American Lithuanian Jonas Starkus (Thompson, Conn., 1938).

ALFRED SENN

BOOK REVIEWS

A Comparative Germanic Grammar. Pp. 353. By E. Prokosch. William Dwight Whitney Linguistic Series. Published for Yale University by the Linguistic Society of America. Philadelphia, 1939.

Before us lies the life work of a great scholar. It is the well pondered resumé of the personal opinions of a man noted for his genial insight into all the problems of Germanic linguistics and for his energetic pursuit of new and better explanations of phenomena for which the average Germanist accepts uncritically the time-worn, and often inadequate, clichés of the preceding generation of scholars. Such a book is, as Professor Kurath has already noted in his preface, bound to prove a challenge to other students in the field and must necessarily lead to vigorous discussion. Nothing could have pleased Prokosch better. In that sense, if in no other, the book is the most significant contribution to Germanic linguistics to appear since Streitberg's Urgermanische Grammatik. It is a fitting monument to Prokosch's restless ingenuity, bringing together as it does his many original views that might otherwise remain buried in his widely scattered publications, and it assures for him a place among the great Germanic scholars:

> Deyr fé, deyia frændr, deyr siálfr it sama;
> En orztírr deyr aldregi, hueim er sér góðan getr.
>
> Hávamál 76.

The book is set up on the usual lines of the comparative grammar, in three parts: The external history of the Germanic languages, Phonology, Inflections—lacking is a syntax, as has been the case with most of its predecessors, Streitberg, Kluge, Loewe, Boer, Meillet—only Hirt has attempted it. An introductory chapter on phonetics and general linguistics, or at least a glossary of phonetic and linguistic terms would have been welcomed by the elementary student. A tabular survey of phonetic symbols and signs used in transcription of languages not written with Latin or Greek alphabets or in setting up hypothetical forms would likewise have been advantageous.

The outstanding merits of Prokosch's book are its breadth of conception and the bold relief in which many moot points are outlined. The historical approach to the questions involved is supported frequently

by quotations from the more important scholars from Grimm down to the present generation. This digest of opinion is then followed by Prokosch's own view, sometimes selecting among or amplifying or combining those already presented, sometimes departing completely from them. This grand-scale conception of the problems of Germanic grammar is particularly precious and stimulating for the scholar who already knows his way through the maze and can distinguish readily between fact and hypothesis, but it has its disadvantages for the less experienced student, and will, I fear, make the book difficult to use as a textbook in beginning graduate courses where all that we can hope to teach is a few bare facts which even the student of literature may be able to grasp.

The chapter (21–34) on the external history of the Germanic languages is short and contains also a brief discussion of Indo-European origins and expansions. In so limited a space, little development of such a controversial subject can be expected. Prokosch recognizes (21) the fact that 'the actual starting-point of the Indo-Europeans, their original home ('Urheimat') is not known. At present, the greater weight of arguments seems to point to Northern or Central Europe, but the views favoring South-Eastern Europe or the Steppes of Western Asia are not to be underrated.' Prokosch points out the fallacy of connecting discussions of language affinities with those of race: 'The concept of an Indo-European family is based on linguistic facts, but does not imply any anthropological coherence. We have no right whatever to speak of an Indo-European ('Aryan') race.' As regards linguistic substrata in Germanic, he concludes (23) that its existence 'is probable, although for geographical and other reasons the common Indo-European element seems to predominate more definitely in the Germanic group than anywhere else.' I hardly believe that the majority of Indo-Europeanists will agree with this or with the view expressed (25) that 'the Germanic languages represent, on the whole, that branch of the Indo-European group that remained longest in or near the original home of the Indo-Europeans.'

The survey of the Germanic languages is of necessity concise, yet, even so, I miss a clear statement (27–8) of the position of Old Icelandic as the important literary language of the Scandinavian group. Prokosch follows the common unfortunate practice of labeling Old Icelandic forms 'Old Norse'. This habit, though usual, is almost as misleading as it would be to label Latin forms 'Old Italic'.

Those who have followed Professor Prokosch's work will already be

acquainted with his revision of the more orthodox scheme of Indo-
European cosonantism, particularly with his conception of *bh dh gh*
as voiceless lenis spirants, for which he would use the symbols $\phi\,\theta\,\chi$. To
my mind, the conception as voiced aspirated stops, or at least voiced
sounds of some sort, is still preferable. The Italic development is the
only one made simpler, I believe, by Prokosch's assumption. I do not,
as he does (40), consider the pronunciation of Greek $\phi\,\theta\,\chi$ as uncertain.
The 'standard' view that they were voiceless aspirated stops is the only
one acceptable to the majority of scholars concerned with historical
Greek Grammar. Prokosch's thesis is based on what he calls the
'fundamental principle' in the Germanic shift (49–50), i.e., the releasing
of the breath in the case of stops, the checking in the case of spirants.
Hence for the Germanic voiced spirants *ƀ đ ǥ* to fit the scheme, they
must be the reflexes of PIE voiceless spirants checked by the closing
of the glottis (50, 52).

Prokosch conceives the first and second sound-shifts as one, in keep-
ing thus with his fundamental principle. The change of PGmc. *ƀ đ ǥ* in
part to stops, *b d g*, he terms the intermediate shift. As to the time of
the shifts (52–5), he recognizes the lack of any good concrete evidence,
and tries therefore to reason out a logical sequence. The change of *bh
dh gh* (= $\phi\,\theta\,\chi$) to *ƀ đ ǥ* was the first, taking place somewhere around
1000 B.C. That of *p t k* to *f þ h* was a process extended over several
generations or centuries, and completed by the third century B.C. The
latest is *b d g* to *p t k*, which was not completed before the end of the
pre-Christian era. The operation of Verner's law was late, in the first
or second century A.D. (62). Its lateness would account for the fre-
quent lack of its effects in Gothic, since the separation of the Goths
from the other Germanic tribes was under way at this time. Conse-
quently, since the operation of Verner's law preceded the Germanic
accent shift, the latter must have taken place among the Goths at an
earlier date than among the other Germans, leaving only a few residual
forms to be affected by the law.

The cause (55–7) of the sound shift is even a more futile subject for
discussion than its chronology, and likewise Prokosch's hypotheses are
less convincing here than on many other moot points. As already
noted, he considers the first and the second shifts as a continuous
process. It coincides in duration and intensity with the migrations
of the Germanic tribes, ceasing soon after their final settlement in the
new home (57 top). The periods of upheaval and stress gave rise to
leaders with personalities for whom 'will and contents predominated

over reflection and form.' This type of personality was reflected in their speech, and their speech influenced that of their followers. Personally, I take little stock in psychological interpretations of linguistic phenomena, hence such an explanation leaves me cool. Of all the causes yet offered for this or any other sound change of the sort, the ethnological ('sub-stratum') theory seems to me the most plausible, but even of this I am by no means a whole-hearted sponsor. I do not believe, moreover, that the first and the second shifts have any connection with each other.

Under the treatment of the IE consonants, I would mention especially section 23 (71–4) dealing with the labiovelars. This series presents so many problems in common, that it is well to take it up, as Prokosch does, separately from the discussions of the respective orders. One of the moot questions here is, when do the labiovelars lose their labial element in Germanic? Unfortunately Prokosch (72) maintains the older, but entirely untenable, thesis that 'the labial disappears before back vowels (IE *u ū o ō*).' I think I have shown clearly elsewhere (JEGPh. 35.17 ff.) that we cannot assume the loss in PGmc. before IE *o ō*. Likewise Streitberg in his last discussion of the matter (Gesch. d. indog. Sprachwissenschaft II, 2, Germanisch 321) has come to the same conclusion: 'Obwohl diese Annahme fast allgemeine Zustimmung fand und lange Jahre die herrschende war, kann sie doch keinen Anspruch auf Glaubwürdigkeit machen.' On the other controversial point, the development of pure labials from labiovelars, Prokosch is less certain (74): 'In some instances, we find *f b* for Gmc. *hw ʒw*. The fact is certain but the exact conditions are not known; sometimes it seems to be due to assimilation to a preceding *w* or *u*.' This is 'Kluge's rule'. Personally I do not believe in the development as a rule at all. Only one instance actually shows such assimilation, namely Goth. *fimf*, etc. < Pre-Gmc. **pempe* for IE **penkʷe*. And this is isolated. Other examples either are based upon wrong etymologies, or have some other explanation. A complete disposal of the material will be found in the JEGPh. 1939. 184ff.

The treatment of vowel gradation (120–31) is, in many respects, admirable, even though we may not agree with Prokosch's hypotheses as to its causes. These matters are too obscure, and there is too much conflicting evidence to make categorical statements. It does seem of course that quantitative gradation is dependent in some fashion upon the accent, which in that case must have been one of stress at the particular time that such vocalic variation arose. But that qualitative

gradation is 'the result of pitch accent', defies all proof.   The factual
material regarding IE gradation in general and its representation in the
Germanic ablaut series is clear and well disposed of.

The treatment of laws of final vowels is succinct and sufficient for the
scope of the book.   Prokosch follows the theory of bimoric and trimoric
accent.   I note that, without expressly stating so, he seems to consider
that vowels of two morae and those of three retain their differences of
length in PGmc. (133): 'during the first two or three centuries A. D., i.e.,
soon after the Germanic accent shift, final syllables lost one mora.
About five hundred years later a second mora was lost; another five
hundred years later, a third.'   I have myself arrived at the conclusion
that there is very little of our laws about the treatment of finals that
can be traced back to the PGmc. period.   The same development did
occur sometimes in different dialects, but it was dialectal, not of PGmc.
antiquity.   The same tendencies, however, are present in all dialects.
Prokosch brings this out clearly.

The treatment of vowel mutation (107 ff.) is concise and clear, perhaps
the best and most inclusive to be found in any of the comparative
Germanic grammars.   From this change is separated, as it must be,
the general Germanic division of IE *e* into *i* and *e*, and *u* unto *o* and *u*,
treated by Prokosch in section 38 (100–1) on the Germanic short
vowels.   Personally, I prefer another statement of these changes, i.e.,
that *e* remained *e* and *u* became *o* except before a high front or back
vowel or semivowel or the combination of nasal + consonant, where
e became *i* but *u* remained *u*.   I do not like to speak of the influence of
Gmc. *a*.   But of course the whole matter is not satisfactory in any
way in which we state it.

Likewise the influence of consonants (112–8) upon vowel development
is commendably done.

I agree with Professor Kurath (preface 5) that the treatment of the
strong verb is a masterpiece.   The significant departure which Prokosch
makes from his predecessors is the great place that he gives to the
Indo-European aorist in the Germanic preterit.   For him (162–82),
the singulars of the first five classes are the only positive perfect forms
in Germanic, and even here, in West Germanic, the 2nd sg. is an aorist.
The plurals of the first three classes (Goth. *stigum, gutum, hulpum*) may
be either perfects or aorists as far as stem is concerned, but the endings
indicate aorist origin.   The 'long vowel' preterits in the plural of the
fourth and fifth classes (Gr. *sētum, nēmum*) are surely aorists.   That of

the sixth class is uncertain (174). But (178) their preterit may be 'nothing but the form of the durative aspect (i.e. of the present system), transferred to preterit meaning by mere force of contrast, since it was the only (or almost only) other ablaut variation.' The unreduplicated preterits of the seventh class in West and North Germanic remain a subject for controversy, but Prokosch (177–82) is inclined to the view that they do not correspond to the reduplicated forms of Gothic. They are possibly from the normal grade of heavy diphthongal bases ($\bar{e}i$, $\bar{e}u$, $\bar{e}l$, etc.), whereas the Gothic singular forms are deviating grades ($\bar{o}i$, $\bar{o}u$, $\bar{o}l$). The Germanic present (and past participle) and the Gothic preterit plural are from the reduced grade (∂i, ∂u, ∂l). The North and West Germanic preterit may be of the same origin as that postulated for class six. However 'the instability of long diphthongs prevents the same degree of certainty that we have in the case of class VI.'

Personally I am much taken by this reworking of the Germanic preterit system, though I realize that many of the details involved need thorough investigation. I note with especial pleasure that Prokosch emphasizes the deceptiveness of the equation Goth. $s\bar{e}tum$ = Lat. $s\bar{e}dimus$ = Skt. $s\bar{e}dim\acute{a}$, as Thumb already indicated. This is a fallacy which I never fail to point out to students of Sanskrit and Latin as well as of Germanics. While Skt. $s\bar{e}d$- and Lat. $s\bar{e}d$- may both be derived form IE *se-zd-, the process is entirely different: Skt. $s\bar{e}d$- represents an intervening diphthongal stage *$said$-, Lat. $s\bar{e}d$- shows compensative lengthening. And IE *$sezd$- would never give Gmc. $s\bar{e}t$-; instead (as Prokosch indicates, 163) we should have *$sist$-. I, also, prefer to separate the Sanskrit and Latin forms rather than the Latin and Germanic, but I am not yet sure that these 'long-vowel perfects' are to be equated to Vedic 3rd sg. aorist passives as (a-)$s\bar{a}di$. That Greek ἔβην and Skt. $ag\bar{a}m$ belong to this type originally (IE *e-$g^w\bar{a}m$-m) reformed by analogy of ἔστην and $asth\bar{a}m$, I am likewise by no means certain. The identification depends on whether we deny, as Prokosch does, the existence of the root *$g^w\bar{a}$- beside *g^wem-. The relation between these forms has, I think, been set forth rather clearly by Beneveniste, Origines de la Formation des Noms en Indo-Européen 156. But without going into Beneveniste's theory of the IE root, the presence of such doublet root forms (diphthongal e-series beside $\bar{a}^*$-series) is too well attested otherwise to be denied in this instance. Cf. *wen/*$w\bar{a}$- 'strike, wound' (Walde-Pokorny 1.214), *$bhel$/*$bh\bar{a}$- 'shine' and 'speak, sound' (ibid. 2.122 ff., 175 f., 182 f.), *mel/*$m\bar{e}$- 'big' (ibid. 2.238, 292),

*stel-/*stā- 'stand, place' (ibid. 2.603 ff., 643 ff.), etc. But the space of a review will not permit of a complete discussion of this and other points raised.

The outline of the Germanic present systems (147–59) is, in my opinion, not of the same significance as that of the preterit. In the first place, the Hindu classification is illogical and arbitrary, and can serve no purpose as an introduction to the Indo-European present formation either for the Indo-Europeanist or for the Germanist. If a point is to be made by mentioning the Sanskrit present systems at the outset, the more logical arrangement of Whitney's Grammar would be better. A much more logical survey would be to follow a parallel table scheme such as that of Professor Buck in his Comparative Grammar of Greek and Latin (257 ff.). As regards Prokosch's actual classification of the IE present types, I would mention one point on which I disagree particularly, i.e., in connection with the various forms of the *j*-suffix. I cannot see how the type (or types) in *jō/ĭ* can be connected with the others. The simple *je/jo* suffix type, of either the primary verbs or the denominatives, can, of course, be connected with the *eje/ejo* of the causatives as a matter of gradation of a dissyllabic base. But this is a light base, and hence cannot give rise to a reduced form *ĭ*. The assumed *ēje/ējo*, if existing, would be merely a form of a light base showing lengthened grade in the first syllable. The form *ĭ* could of course occur, but *ī* must be derived from the reduced form of a HEAVY base. Prokosch (152) assumes the suffix *ē(i)* for infinitive forms like Lith. *veizdĕti*, ChSl. *vidĕti*, Lat. *vidēre* and the Greek 2nd aorist passive ἐχάρην, etc., beside the presents in *j* : Lith. *véizdžu*, ChSl. *viždą*, Grk. χαίρω, to which would then correspond a Lat. **vidiō*. For Prokosch, this is the Germanic 3rd class weak, which shows, as Latin does, extension of *ē* to the present system, hence Goth. *ai* (in *habais, habaiþ*) = [ε] reduced from *ē*, as in ON *hefer, hafeþ*.

The history of opinion on the origin of the dental preterit (194–9) is extremely concise and quite sufficient. Prokosch himself leans toward Brugmann's hypothesis of a reformation of a thematic preterit belonging to presents in -*to*-, but prefers to start from the suffix form -*tā*- as appearing in Latin frequentatives and intensives in -*tāre*. Hence the Alemannian forms in -*ō*- are the more original. This vocalism is likewise to be assumed for most of the North and West Gmc. forms, and for Gothic 1st and 3rd sg. -*da*, but others (e.g. Goth. 2nd sg. -*dēs*, ON 2nd and 3rd sg. -*þer, -þe*, OSax. -*des, -de*) require assumption of IE *ē*. Prokosch is at loss to account for this. His dubious suggestion of the

parallel relationship of Latin indicative in -*ā*- of the first conjugation beside subjunctive in -*ē*- is out of the question, since *ē* is here the normal thematic subjunctive sign. It would hardly be possible to postulate subjunctive origin for part of the Germanic forms. The OHG (Francon., Bav.) plural endings in -*um*, -*ut*, -*un* he considers transferred from the strong preterit, and the Gothic dual and plural -*dēd*- forms actually go back to the root **dhē*-, but are a Gothic innovation. This is the extent to which Prokosch admits the 'composition theory' of the dental preterit. I myself am inclined to give it more credit.

The introductory comments on nominal inflection (225–31) are clear and quite sufficient, particularly if the remarks on Word Structure (141–4), preceding the verb, are taken into consideration here also. The author, as we know from his Outline of German Historical Grammar (from which he here cites), follows essentially the theory of Brugmann on the origin of grammatical gender. A praiseworthy feature, it seems to me, is the survey of the various case endings (23–40) before the declensions are taken up individually. This obviates much repetition regarding case-forms which are identical in origin and development in different stem-classes. Prokosch is less original in this chapter than in many others, for the simple reason, of course, that about all has already been said that can be said with any certainty on the subject. Only one point, it seems to me, is handled too briefly: that is the treatment of the *jo*- (and *ijo*-) stems, even in consideration of the information already given (91–2, 136) on the treatment of *j*.

The treatment of the pronoun (266–85), especially of the various demonstrative stems, is particularly good, and contains many new and arresting interpretations. Prokosch pays especial attention to the use of particles in the building up of demonstratives. A criticism of some points will be found in the detached observations following.

The numerals are considered with sufficient detail, with some discussion of the conflict of the decimal and duodecimal (sexagesimal systems). It might be worth mentioning that Brugmann's interpretation of Goth. *sibuntēhund* '70', *ahtautēhund* '80', *niuntēhund* '90', *taihuntēhund* '100', as *sibuntē-hund*, etc., rather than *sibun-tēhund*, etc. (according to Schmidt), is perhaps more probable if we start with *taihuntē-hund* as the original of the series; that is, literally, 'a decade-hundred', i.e. 'a decimal hundred'. On this model were later formed (but already in PGmc. times) the cardinals for 70, 80, 90. Otherwise, it seems to me, we get into the difficulty that *sibuntē-hund* 'a hundred consisting of groups of seven, ein Siebener-Hundert', and likewise

ahtautē-hund and *niuntē-hund*, taken by themselves with the same analysis, lead to the assumption of whole systems of counting by sevens, eights, and nines. They must rather be analogical forms after *taihuntē-hund*.

With regard to OIcel. nom.-acc. neut. *fiǫgor*, gen. (all genders) *fiǫgorra* '4', Prokosch quotes Heusler, Aisl. Elementarb. 173, Anm. 2: Ein Uebergang ð >g zeigt sich in *fiǫgor* '4' Ntr. :·got. *fidur-*; wohl partielle Angleichung an die umgebenden velaren Vokale. I believe this to be altogether the wrong interpretation. As is generally conceded (Prokosch 287, Walde-Pokorny 1.512), the North and West Germanic forms go back to a Pre-Gmc. *k^wekwór-*, *k^wekwí-*, *k^wekúr-* by assimilation from PIE *k^wetwór-*, etc. By Verner's law -*kw*- before the accent > PGmc. *gw*, whence *w* before vowels except *ŭ* but *g* before *ŭ*, and -*k*- before the accent > PGmc. *g*. Hence *g* arose legitimately from the PIE gen. *k^weturōm,* acc. *k^weturṇs*, and loc. *k^wetwṛsu* (since *ṛ* > PGmc. *ur*).

Yet one more point on the numerals. I believe Zupitza was right (Germ. Gutt. 11–12) in connecting the final member of 'eleven' and 'twelve' (Goth. *ainlif, twalif*) with Goth. *bileiban*, etc. 'remain', *af-lifnan* 'be left', etc. (I.E. **leip-*), rather than with *leihvan* 'lend', etc. (IE **leik^w-*), on the assumption of the identity of the Germanic forms with Lith. *venúo-lika, dvý-lika*. I must refer, however, for the details to the forthcoming discussion in the JEGPh. mentioned above.

Detached observations and corrections (reference to page and line unless otherwise noted):

Attention should be called to the inconsistency in the use of *ṛ, ḷ, ṃ, ṇ* for the syllabic liquids and nasals. I take it, since the diacritic is sometimes used to distinguish them from consonant *r, l, m, n*, that it is intended everywhere. I list here the omissions that have come to my attention: 63.16; 68.4 from bottom; 73.10; 104.1, 7; 127.3 from bottom; 131 middle, col. 1; 170.15; 217.13 from bottom; 254.8–9; 256.2; 287.9 from bottom.

There is considerable inconsistency in setting up various grades of the IE root to account for the forms cited, as, for example, in the table (38–39). It seems that the normal grade would have been sufficient in such cases as this.

38.10 passim: The use of *g^w*, etc., for the IE labiovelars would be preferable to Prokosch's *gw*, etc. 44.15, Lith. *žiemà* lacks accent. 44.8, read 'and consonants' after 'before *a o ω*'. 45.§13: The nature of the 'sonorous consonants' should be further developed with some

reference to a theoretical discussion, as, perhaps, to Bloomfield, Language 121 ff. 46.28, read Lith. *vilkas* for *vĩlkas*. 47.11: The impression would be that Grk. ϝ (IE *w*) gives the rough breathing, since only ἔννυμι is cited (in connection with Goth. *wasjan*). 52.5, read *trēs* for *tres*. 58.3 from bottom, read *ĝhoŋgh-* for *ĝheŋgh-*. 59.6 ff. and 75.24: Some, as the present reviewer, will not agree that the spirantic character of intervocalic *b* and *d* and of initial and intervocalic *g* in Gothic is quite certain. I prefer to follow Streitberg here. 60.15, read *linquō* for *lĩnquō*. 64.8: It is perhaps better not to cite Lat. *caput* and OIcel. *hǫfoþ*, with monophthong, alongside Goth. *haubiþ* and the West Gmc. forms, with diphthong, without a note of explanation. 64.12, perhaps better read (Goth.) *tigjus* for *tigus* since only plural forms occur (*tigiwē*, *tigum*, *tiguns*). 66.7 from bottom, read *vincō* for *vīncō*. It is better also to read IE *wéik-* for *wéi(n)k-*, since nasal infixes do not occur in strong grade presents. 72.4–5 from bottom, and 127.3 from bottom: Prokosch derives OIcel. *koma*, OE *cuman*, OHG *koman* from the grade *gwm̥-*, yet elsewhere (124 bottom, 125 top) he assumes the existence of the reduced grade ɞ, and, in fact, 130.9 from bottom, has actually derived the vowels of these presents from it. 73.22, the connection of OIcel. *segia*, etc. 'say', with Goth. *siggwan*, etc. 'sing' seems most dubious to me. 76.10–1: I cannot reconcile the pronunciation of *g* as [j] in Old Norse initially before front vowels with the New Icelandic pronunciation in the same position where it is a palatal stop (cf. V. Guðmundsson, Islandsk Grammatik 11). 84 top: The use of 'Norse' is ambiguous, but apparently here refers to the later forms of Scandinavian, in which case the statement 'initially it (*h*) disappeared before *l r n w* in Norse as well as in West Germanic; only English, at least American English, has preserved *hw*' needs revision. What about NIcel. *hlæja*, *hreinn*, *hníga*, *hvað* (though sometimes *h* may be dropped before *r* and *n*, and *hv* is normally, in the West of Iceland, pronounced *kv*)? Cf. op. cit. 12, 41. 84.3 from bottom, read Bartholomae for Bartholomä. 85.6 from bottom, read IE *pl̥nós* (or *pu̯lǝnós*), Lith. *pìlnas*, Sk. *pūrṇá-* for IE *pl̥nós*, Lith. *pílnas*, Sk. *-pr̥ṇa-*. 87.11–12, Lith. *pláuti* lacks accent. Likewise *pláuti* means 'rinse' and Sk. *plavatē* 'swims, sails, etc.', not 'pluit'. 88.15 from bottom, read ON *nǫkkueþr* for *nokkueþr*. 91.18–19: Grk. ὑμεῖς is cited (but without macron) with Goth. *jus*, Skt. *yūyám* as an example of IE initial *j* appearing as the rough breathing, and 282.12 we find (Aeolic) 'ὕμμε < *us-me* or *jus-me*'. The usual derivation takes the entire inflection of the Greek 2nd person pl. pronoun from the weak grade of the stem of the oblique cases, IE *wes-/wos-*, namely

us-m-, the original nominative, with its initial *j*, being lost. Of course there is no proof whether the Grk. *ὐ-* is from IE *u-* or *ju-* since initial upsilon always has the rough breathing (except in those dialects which have psilosis). 92.3: I see no reason for deriving Goth. *hardus* from **hardwaz*. Why not a *u*-stem originally (cf. Walde-Pokorny 1.354)? 93.7: I do not understand the possible connection between Lat. *flāvus* and Goth. *bliggwan*, etc. 94.29: Grk. δύω is from IE **duwō* (*dъwō[u]*), not **dwō*. 94.32, Grk. μᾱτηρ and 94.34 φρᾱτωρ lack accent. 94.31: The statement '*ā* becomes *ē* in Attic-Ionic Greek' needs to be conditioned for Attic. 95.3, read IE *dékm̥* for *dekm̥*. 95.8, read Grk. ὀκτώ for ὄκτω. 95.7 from bottom; read Grk. πιθέσθαι for πιθέσθαι. 102.15 from bottom: Lat. *tollō* is from IE **tl̥-nō*, not **tъl-nō* (*ъ* gives *a* in Latin). 102.8 from bottom: It is not well to set up IE **widmén* since the ending -μεν (ἴδμεν) is peculiarly Greek. 105 bottom: I believe that few will follow Hirt, as Prokosch does, in the assumption of monophthongal value for Goth. *ai* and *au* when representing inherited diphthongs. 111.4, read Go. *aiƕa-* for *aiha-*. 128.4 from bottom, read *ĝnō-* for *ĝnē-*. 129.4: I fail to understand the derivation of (Goth.) *fulls* from **pl̥nos* 'with secondary loss of *ə* in Germanic'. This is, of course, **pl̥nós* (or **pъlənós*, if we do not like to set up long syllabic liquids and nasals). Cf. observation to 85.6. 142.17 ff.: The interpretation of Lat. *crēdō*, etc. as compounds of a word for 'heart' is surely wrong (cf. Walde-Pokorny 1.425 f., Walde-Hofmann 1.286 f.). 142.1–2 from bottom: I would reject the connection of Engl. *calf*, etc. with Grk. δελφύς, and especially that of Grk. βάλλω with either. 147.18, *krīṇā́mi* lacks accent. 167.18: The connection of Grk. πέλω 'turn' with πωλέω 'sell' is certainly wrong (cf. Walde-Pokorny 1.514, 2.51). 169.5 ff. from bottom: I cannot follow the connection of Goth. *filhan* with *filu*. 173.16, read Go. *garaþjan* for *garabjan*. 174.1, read Go. *farjan* for *farjon*. 175.15, read '*g* or *k* before *e*' for '*g* or *k* after *e*'. 177.14, read Sverdrup for Swerdrup. 188.12, read *ĝъnō* for *ĝъnō*. 205.3 from bottom ff.: The connection of Lat. *co(m)-* and Goth. *ga-*, etc., with the IE indefinite-relative pronominal stem *kʷo-* is impossible, even if we assume that the labiovelar lost its labial element before *o* (as Prokosch does and I do not), since the Oscan form is **kúm-**, *com-*, and Welsh has *cyf-*, *cyn-*. A labiovelar would give *p* in these dialects. Likewise we have Grk. κοινός (if from **κομιος*), not **ποινός*. 208 top: The difference between IE thematic and athematic subjunctive and optative signs is not made clear. 223.21 f.: The derivation of Grk. κοχώνη 'perineum' from **ĝhəghōnā* is of course impossible if we intend (as Prokosch does, and as is prob-

ably correct) to connect it with Skt. *jáṅghā*, Lith. *žengiù*, Goth. *gaggan*, etc. κοχώνη probably stands for *κaχώνη with vocalic assimilation, this from *χaχωνā, IE *ĝhṇgh-ōnā (cf. Walde-Pokorny 1.588, Boisacq 505). 223.22, read Sk. *jáṅghā*. for *jáṅghā*. 224.15 f.: The statement concerning OE *ēode* 'went' that 'its connection, or near-identity, with *iddja* seems obvious, although even that is doubted by some' needs alteration, I believe. Goth. *iddja* is probably from IE *e-jāt* with *-ddj-* from intervocalic *-j-*, as Prokosch also thinks, but OE *ēode*, if connected at all, is merely an ordinary dental preterit from the same root (IE *ei-*). 226.6 and 18, read Grk. πώς for πῶς. 227.16 from bottom, and 229.9, read *mēnsa* for *mensa*. 232.9–10: Grk. gen. χωρῶν is from pronominal *-āsōm*, not directly from *-ā-o-m*. 234.12–13: Att. gen. sg. of *o*-stems in *-ov*, can, taken alone, of course come either from *-eso* or *-oso*, but the uncontracted (Hom.)-*oo* shows the o-grade of stem; further, in view of Hom. *-oιo*, Att. *-ov* is probably likewise from *-osjo* = Skt. *-asya*. 236.19, after *-ōs* read 'and *-ās*'. 237.10 from bottom: The OIcel. nom. pl. masc. *n*-stem is, of course, *hanar* after the *o*-stems, not the phonetically correct **hana* as indicated here. The form is given correctly at 238.17 and in table on 249. 238.3, read ON *augo* for *auga*, likewise given correctly in the table on 249. 245 table, read dat. sg. *gest* for *geste*, and, 246.11 ff., revise accordingly the statement that 'the endings of the singular of the masculine (*i*-stems) are everywhere the same as those of the *o*-stems'. For the (unusual) appearance of *-e* in dat. sg. here, cf. Noreen 387, Anm. 2. 249.16–7, read (ON nom. acc. sg. *u*-stems) *skioldr, skiold* for *skiǫldr, skiǫld*, or if the later forms are preferred keep these but then read also (acc. and dat. pl.) *skiǫldo, skǫldom* for *skioldo, skioldom*. See Noreen §89, Heusler §§79, 80, 224. 265.23: I see no need to consider the *-iz-* of the Germanic comparative as a weakening from *-jos-* 'both medially and finally'. It is rather merely an inherited weak grade as in Grk. ἡδίων. 273.5: OIcel. *hinnveg, hineg* usually means 'the other way, in the other place, there' (not 'this way, thither'), just as *hinn* has come to mean 'the other'. 289.8, read, presumably, **teʒun[d]uns* (i. e. IE **dekṇdṇs-*) for **teʒun[d]ns*. 294.6, read *þaim* for *þam*. 298, last line, read *zūti* for *zlti*.

GEORGE S. LANE

Das substantivierte Adjektiv im französischen. Pp. viii + 139. By J. MALKIEL. Berlin Dissertation. 1938.

Some fifty years ago Adolf Tobler made a classification of the in-

stances where an adjective in French is used as a substantive and this was reprinted in volume two of his Vermischte Beiträge. The copy of the Beiträge in the possession of the Romance Seminar at Berlin has additions made by Tobler's own hand. It is from this source that Malkiel received the inspiration of his present study, although he received many suggestions also from Lombard's Les constructions nominales dans le français moderne and elsewhere. Unfortunately economy in printing this dissertation has been achieved at the expense of the reader. The pages have very little margin and the type has been cramped together with a minimum of paragraph spacing. There is no index of constructions discussed, only a table of contents giving the four main divisions. In order to do this thesis justice the reader is obliged to go through it word for word, noting subheadings, etc., in the very narrow margins, and this is a labor that most scholars may not care to expend on a work of this type. It is true that Malkiel has outlined his subject rather elaborately, under letters and numbers, but these are insufficient to clarify the subject matter for the average linguistic reader.

There is some excellent matter in this dissertation if the reader digs it out. Malkiel has a thorough understanding of functional change and some of the points which he discusses are very illuminating. Take for example his treatment of the secondary adjectives *vieillard*, *finaud*, *jeunesse*, etc. (126–8), formations which the average grammarian would not think of as adjectival in their origin. His systematic understanding of the subject is illustrated by the order of his four main topics: adjectives of color used as nouns, adjectival substantives expressing a part of a whole, adjectives as abstract neuters, and finally adjectives denoting persons. These are in ascending order of complexity of function. Malkiel admits, of course, that he has only treated a portion of his subject. For his statement that *la manquer belle* originally showed *belle* as a neuter abstract I should refer him to Paul-Louis Faye's On certain adverbial and semi-adverbial uses of *bel beau* in Old French (University of Colorado Studies 22, June, 1935). In his discussion of the quantitativ beschränkte Neutrum (94 ff.) I do not find such a construction as Cet homme etait vieux et affaibli, mais d'un bon! in which the necessary qualification of *bon* is omitted affectively. Although *bele* may have been used originally in addressing only those young ladies who possessed such quality, in Old French this term was reduced to an equivalent of the present-day *Mademoiselle* (see 135).

I repeat that this is a worth-while study, quite admirably conceived. It belongs, however, to the field of functional language study which has so great a vogue now in European circles but which is not well understood by Romance linguists in America. We continue to emphasize purely historical methodology and do not follow with comfort the writings of Bally, Sèchehaye, Dauzat, Gougenheim, Carl de Boer, Spitzer, and least of all the volumes of Damourette and Pichon. This is a defect that we should remedy without, perhaps, going to the extremes of some of our European colleagues.

URBAN T. HOLMES, JR.

Los Fueros de Aragón, según el manuscrito 458 de la Biblioteca Nacional de Madrid. Pp. lxxvi + 648. Publicados por Gunnar Tilander. (Skrifter utgivna av kungl. humanistiska vetenskapssamfundet i Lund XXV) Lund: C. W. K. Gleerup, 1937.

This is a publication of major importance in the field of Spanish philology. Many are the *fueros* or collections of legal statutes that have survived from medieval Spain, but this one, promulgated in Latin by Jaime I of Aragon in 1247 and translated very closely into Aragonese in the second half of the thirteenth century, has not received heretofore the attention that it deserves. Tilander has discovered two additional manuscripts of the Aragonese version which he now publishes from the oldest of its manuscripts preserved in Madrid. Although the editor studies with some care the spellings, the morphology, and the syntax of his basic manuscript (early fourteenth century) his outstanding contribution is the glossary of three hundred and ninety-one pages in which some two thousand words are discussed. There is as yet no dictionary of Old Spanish; but an American committee is working to remedy this deficiency. They will surely find some valuable material in this glossary in which the compiler lists after each Aragonese form the word in the Latin original which it translates. Of special interest to me are the rare words *rafeç mientre* (de facili) and *ruenna* (not in the Latin) which may mean 'rust'. Other items which are discussed very fully are *albará, axuar, belle ylle ha ylle hu, boalar, bort, cabomaso, çalmedina, caniçar, cavería* (for *caballería*), and so forth. Tilander has, for the most part, written his explanatory material in very clear Spanish; there are several passages, however, which could have been revised: Supongo todavía que algun otro manuscrito más se custodie hoy en día en bibliotecas particulares (xxix) and En la primera hoja de la

segunda parte hay una pintura que representa el rey, escuchando el pleito (xxi).

URBAN T. HOLMES, JR.

Castellano, Español, Idioma Nacional, Historia Espiritual de Tres Nombres. Pp. 198. By AMADO ALONSO. Buenos Aires: Coni, 1938.

Amado Alonso, Director of the Instituto de Filología at Buenos Aires, presents here a study of the semantic development of the three names in the title.

Dwelling briefly on the emerging of *romance* from Vulgar Latin, he mentions the occasional use of *romance leonés, romance ovetense,* and *romance castellano* to distinguish the principal *romances* of Spain. The use of *lengua vulgar* was a later development than *romance,* but both were used during the Middle Ages. The author then traces the development of the use of *castellano,* which replaced Latin in the thirteenth century. Later, in the Renaissance, it ceded priority to the term *español,* a neologism of greater cultural significance than the strictly regional *castellano,* and brought to the fore when a move for national unity was afoot.

During the sixteenth century both terms were in use, *castellano* as the more specific, *español* as the more general. The author then takes up the courtly concept of language as inherent in the idea of *castellano,* which begins to broaden in scope due to the influence of Toledan speech. This, he says, shows a tendency of *castellano* to develop beyond the precepts of the language of Old Castille. Next he discusses Herrera's aristocratic ideal of a courtly, poetic language with a literary heritage from Castille and any other part of Spain. Herrera terms this language *español* and reserves the term *castellano* for the speech of Old Castille alone. *Español* continued in ascendance in the seventeenth century.

Alonso speaks of the conservative influence of the Real Academia Española, founded in 1713, which decided in favor of *castellano,* because the language was of Castilian origin and was best spoken in Castille. The historical method and a tendency towards centralization caused language to be regarded as something static that had attained perfection in the preceding century and hence should become fixed so as to prevent decay. This was directly opposed to the previous theory of a language as always undergoing change.

Mayáns y Siscar in his Orígenes de la lengua española (1737) was conscious of the excellence of *castellano* but realized the greater sig-

nificance of *español*, which term he applied to the koiné or adopted of a general language for all the Spanish.

Linguists like Menéndez Pidal preferred *español*, since all regions had collaborated to perfect the literary language. In the twentieth century, when Pidal became President of the Academia, the latter body reflected his sentiments and came to prefer *español* because it was the language of Spain and its great literary monuments.

The author treats the origin of *idioma nacional*, controversially used in Spanish America, particularly in Argentina, during the late nineteenth century and at present. It has not become standard as there is much opposition to it.

He draws parallels with the earlier struggle in Italy between Italian and Tuscan, in France (though no change of name was involved here), in Brazil between Portuguese and Brazilian, and in the United States, where there is a current tendency to recognize an American Language as opposed to the traditional English. This movement in other countries as in Spain he represents as a step toward nationalism in speech, a sort of patriotic jealousy.

The entire study is logical, clearly written, and carefully documented, though in this latter connection it might be wise to call to the author's attention a short article by E. C. Hills in Hispania (Calif.) 9.190–1 (1926), entitled: The Terms 'Spanish' and 'Castillian', in which he advocates the use of 'Spanish' for the language in general and 'Castillian' for that spoken in Castille.

Though his parallels are often beside the point, Alonso on the whole has made a worthwhile semantic contribution.

GEORGE C. S. ADAMS

Studies in Modern Romansh Poetry in the Engadine. Pp. xi + 310 with nineteen plates. Planographed. By MILDRED ELIZABETH MAXFIELD. Cambridge (Mass.), 1938.

This is a Radcliffe College dissertation. I should like to say, in all soberness, that I consider it epoch-making. There is not much material in these pages that will interest the Romance linguist except the text of certain modern Engadine poems, but the fact that Miss Maxfield has called attention to the wealth of literary and linguistic material which exist in Raeto-Romance makes her study of prime importance. I was much impressed several years ago by her translation into English of Peider Lansel's I Retoromanci (Milan, Hoepli, 1935) which she had

printed and distributed in this country while she was still in Switzerland. We might well suggest to our colleagues that they put into the hands of their doctoral candidates in Romance Theodor Gartner's Handbuch der Rätoromanischen Sprache and the Decurtins Chrestomathie (printed in Romanische Forschungen) as well as these publications of Miss Maxfield. In this connection we should like to call attention to the new Dicziunari Rumantsch Grischun, edited by Chasper Pult and Andrea Schorta, of which the first fascicule has just appeared.

Dr. Maxfield has considerable of the crusading spirit. She insists among other things that Raeto-Romance be our spelling in the future and not Rhaeto-Romance. It will be difficult to change an old habit.

Old French scholars should be particularly interested in the Raeto-Romance dialects because of the retention there of certain early syntactical constructions which have disappeared elsewhere. I refer in particular to *stot* which, although personal, is the equivalent of the Old French impersonal *estuet*, the use of *ni* in an affirmative sense, the frequency of clauses introduced by *anzi* (Old French *ains*) and so forth. Let us hope there will be an awakening of interest in this field in America, in which case we will owe considerable to the efforts of Dr. Maxfield.

<div style="text-align: right">URBAN T. HOLMES, JR.</div>

NOTES AND PERSONALIA

THE PRESIDENT OF THE SOCIETY has appointed, as Committee on Nominations for 1940, Prof. E. H. Sturtevant, Chairman; Prof. A. C. Baugh; Prof. H. Keniston. Members who wish to make suggestions to the Committee should communicate with the Chairman before October 1.

THE PRESIDENT OF THE SOCIETY appointed Prof. J. L. Boysen, of the University of Texas, to represent the Society at the ceremonies of inauguration and dedication of the San Jacinto Museum of History (San Jacinto, Texas), April 20–1; and Prof. E. H. Sehrt, of the George Washington University, to represent it at the Sesquicentennial Celebration of Georgetown University, May 28 to June 3.

THE JOHN SIMON GUGGENHEIM MEMORIAL FOUNDATION recently awarded 69 fellowships to the candidates judged most capable of adding to the scholarly and artistic power of this country. The keen competition is shown by the fact that there were this year more than one thousand candidates. Three Fellowships were awarded in Linguistics, all the recipients being members of the LINGUISTIC SOCIETY OF AMERICA:

Dr. Zellig S. Harris, Assistant Professor of Hebrew at the University of Pennsylvania: to tell the story of the revived new Hebrew spoken in Palestine, a dead language formerly known only from written records, now the native language of thousands of children.

Allen Walker Read, B.Litt. (Oxon.); to continue a dictionary of Briticisms, a glossary of British variants from normal American English.

Dr. Harold Whitehall, Lecturer in English at the University of Wisconsin: to write a history of the language of Colonial New England, based on evidence from native spellings, rhymes, spelling books, and grammars of the period.

THE PHONETICS LABORATORY OF THE STATE UNIVERSITY OF IOWA is prepared and willing to provide high-quality portable field recorders to any linguist in the Middle West who desires to make use of them. The only cost will be that of the records themselves and that of a brief

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period of instruction in the use of the apparatus, at Iowa City. Further information may be secured from Dr. J. M. Cowan, East Hall E 24, Iowa City, Iowa.

THE LINGUISTIC SOCIETY has received from the Waverly Press a pamphlet giving all the special types and types with diacritics available for the printing of the Society. Members who contemplate sending typescripts to the Editor and have not received the pamphlet may secure a copy from the Secretary of the Society.

HOLLISTER ADELBERT HAMILTON, Professor at Elmira College (N. Y.), and a member of the Linguistic Society of America since 1929, died on May 23, 1939, in his seventieth year.

He was born at Savannah, New York, on January 14, 1870, and received the A.B. degree from the University of Rochester in 1892. He did graduate work at the University of Chicago and at Johns Hopkins University, which granted him the Ph.D. in 1899. He was Instructor in Latin and Greek at the University of Rochester 1894–6, Lecturer in Greek at Bryn Mawr College 1899–1900, and Professor of Classical Philology at Elmira College from 1900 on. After serving as Acting President during an interim, he was made Vice-President of Elmira College in 1918, which position, like his professorship, he held until his death.

He was a member of a number of professional associations, but was also a man of wider interests, as is shown not only by his administrative duties, but by his service as Trustee of the Steele Memorial Library, as a Member of the Board of the Elmira Federation for Social Service, and as a lecturer and teacher at the Elmira Reformatory, where he addressed the inmates one or more times a week for more than thirty years. His popularity at Elmira College is attested by the fact that many classes chose him to be their 'patron saint'. Even those who merely met him at meetings, as I have done, could not fail to note his genial friendliness and human sympathies.

ROLAND G. KENT.

EDWIN HOTCHKISS TUTTLE, whose death was chronicled in the last issue of Language, died on January 25, 1939 (not January 24). He was born on September 23, 1879, and was a graduate of Yale University. He was one of the special editors of Webster's New International

Dictionary, and at the time of his death was connected with the Languages Publishing Co., of Washington.

ROBERT A. HALL JR., Assistant Professor of Foreign Languages in the University of Puerto Rico, goes this autumn to Princeton University as Instructor in Modern Languages.

THE FOLLOWING NEW MEMBERS FOR 1939 have been received into the Linguistic Society since the last published list, and up to June 12, 1939:

Morris Bench, M.A., Instructor in Romance languages, Pennsylvania State College, State College, Pa.

Albert T. Buffington, Ph.D., Assistant Professor of Languages, University of New Hampshire, Durham, N. H.; *Pennsylvania German.*

Albert Leo d'Elia, A.B., graduate student of French in the University of North Carolina; 117 Blydenburg Ave., New London, Conn.; *Italian dialects.*

Edwin B. Dike, Ph.D., Professor of English and Head of Dept., Sioux Falls College, Sioux Falls, S. D.; semantics.

Bernhard Geiger, Ph.D., Professor in the School for Iranian Languages, 517 W. 113th St., New York City.

Alexander Issatchenko, Ph.D., Instructor in Slavic Philology in the University; Vegova 8, Ljubljana, Yugoslavia; *American Indian languages, metrics.*

Hilda C. Laird, Assistant Professor of German, Queen's University, Kingston, Ont., Canada.

Bruce A. Morrissette, Ph.D., Assistant Professor of Romance Languages, Washington University, St. Louis, Mo.

Erma Renninger (Mrs. H. D. Learned), A.M., graduate student in Indo-European linguistics in the University of Pennsylvania; Bala-Cynwyd, Pa.

John F. Sullivan, Ph.D., Instructor in German, City College of New York; 1935 Summerfield St., Ridgewood, L. I., N. Y.

Joseph Wohlberg, M. A., Assistant to the Recorder, City College of New York, 17 Lexington Ave., New York City; *Latin, Greek, Hungarian.*

'TO COME' AND 'TO GO' IN ḪURRIAN

ALBRECHT GOETZE

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In the Mitanni letter the following two pairs of passages are found which evidently vary identical ideas:

(a) *a-ti-i-ni-i-in* [I]*Ma-ni-e-na-an še-e-ni-iw-wə-ú-[e]* (14)
pa-aš-ši-i-it-ḫi ú-ú-na (II 13f.) and

(b) [. . . . . .] (114) [[I]*Gi-*]*li-i-an* [*pa-aš-ši-i-it-ḫi-iw-wə*
[I][*Ma-ni-*]*en-na-a-an pa-aš-ši-i-it-ḫi-ip* (115) [*na-*]*ak-ku-ša-a-ú*
ú-ú-na-a-al-la-a-an še-e-ni-iw-wə-ta (I 114f.).

(c) *ip-šu-ši-i-in ti-i-ḫa-níš-ḫi-i-in ú-ú-na-a-an* (IV 49) and

(d) *ú-na-a-la-an* (20) *še-e-ni-iw-wə-ú-a ti-i-ḫa-*[ni]*níš-ḫa-la-an*
ip-šu-ši-i-la-an (III 19f.).

The verb is *ú-ú-na* and *ú-ú-na-a-an*[1] in (a) and (c), but *ú-ú-na-a-al-la-a-an* and *ú-na-a-la-an*[2] in (b) and (d). All recent interpreters agree that the difference implies a difference in number[3]. The sentence (a) is concerned with Mane alone, (b) however, with Gilia and Mane; grammatically these persons appear in the *n*-form of the noun. An *n*-form is also found in (c), while in (d) it is replaced by a form in *-l(l)a-n*[4]. The negative fact must also be mentioned that in none of these sentences an *š*-form of the noun appears, the most obvious characteristic of the transitive active sentence, in which it indicates the agent (subject). That this is not accidental is confirmed by the circumstance that no form, either of this stem or of morphologically related stems, ever occurs together with a nominal form in *-š*.

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[1] Analyse *una-n*; the final *-n*, I believe, resumes the *n*-case of the noun. This is regularly done wherever the verbal form begins the sentence. Here, *unan* appears, for reasons as yet unknown, in the interior of the sentence.

[2] For the spelling with only one *l* see Friedrich, Kleine Beiträge 17f., 27.

[3] Bork (p. 91) and Friedrich, Kleine Beiträge p. 27, translate I 115 '(ich) habe sie zu meinem Bruder gesandt (geschickt)'. Friedrich expresses his surprise at the form and refers to Messerschmidt's remark in Mitanni-Studien 48. Messerschmidt who has done such splendid work seems to consider already the existence of an intransitive verb of special form.

[4] For *-lla* as a plural suffix cf. Friedrich, Kl. Beitr. 31; according to p. 27 it is equivalent to 'eos'.

Hence, the suspicion is justified that we have to deal here with forms of the intransitive verb.

Some clue as to the meaning of the stem *una-* is contained in its construction with a nominal form in *-ta* (*še-e-ni-iw-wə-ta* 'to my brother') in (b).   This points, as a first choice, to a verb of movement like 'to go' or 'to come'.

A confirmation of this working hypothesis comes from a search for analogous passages in the Akkadian letters of Tušratta.   It is known that the verbal stem *nak-* corresponds to Akk. *muššuru* 'release[5], dismiss'; accordingly *na-ak-ku-ša-a-ú* of (b) means 'I released, I dismissed'. Now, we read in EA 19 72, in a passage dealing with ambassadors: *ḫa-mut-ta li-miš-šer-šu-ma li-il-li-ik* 'he (i.e. my brother) may quickly dismiss him so that he (i.e. the ambassador) may go'; and in EA 28 18f. : *a-du* [am]*mār šipri*[ri]*-ia-me aḫu-ia ú-ma-aš-ša-ru-ú-ma-a-me i-il-la-ku₈-ú-nim* 'until my brother dismisses my ambassadors and they come here'[6]; cf. furthermore EA 29 167.

The passages under discussion can thus be rendered with good reasons as follows:

(a) 'And now(?)[7] Mane, my brother's ambassador, comes'.
(b) '. . . . . I dismissed Gilia, my ambassador, (and[8]) Mane, your ambassador; they come to my brother'.
(c) 'a valuable(?)[9] shipment[10] comes'.
(d) 'valuable(?)[9] shipments[10] for my brother come'.

From the grammatical point of view it is essential that the *n*-form of the noun which, with transitive verbs, indicates the person or object affected by the action ('direct object'), with this (intransitive) type of verb serves to indicate the person who moves.

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[5] Opposite Akk. *kalū* 'detain' (cf. e.g. EA 19 72), Ḫur. *kuz-* (cf. IV 40 and Messerschmidt p. 87).   Both verbs mean also 'release an order, ordain'.

[6] Note the change of subject which in an analogous way recurs in Ḫurrian.

[7] In *ati* I prefer to see some particle for the introduction of sentences.

[8] I am unable to find in *-an* the conjunction 'and'.   The point needs a more thorough discussion, which will be given elsewhere.

[9] This is merely guessed from the context.

[10] This is based upon Messerschmidt's proposal (Mit.-Stud. 62) to consider *tiḫan-* as the rough equivalent of Akk. *šubulu* 'cause to bring'.   The derivation with a *šḫ*-suffix may well create a noun analogous to Akk. *šubultu* 'shipment, present'.   The suffix *-šḫ-* is well known in Ḫurrian, as a look at Gordon's list of Ḫurrian words in the Nuzu texts (Orient. 7 52) and still better at Lacheman's contributions to Starr's Nuzi I (528ff.) will show.   Among the words with *-šḫ* which occur in Hittite texts (Kleinasiatische Forsch. 179) a large percentage may be of Ḫurrian origin.

The proposed rendering seems to fit the other occurrences. *ú-na-a-an* of III 13 has to do with the departure of Tušratta's daughter for Egypt[11]. After the arrival of the bride with dowry and special presents has been announced in a long passage, Tušratta raises his own claims for counter-presents:

> *un-du-ma-a-an in-na-me-e-ni-i-in še-e-ni-iw-wə-ú-e aš-ti*
> *ú-ni-e-it-ta* (22) *in-na-ma-a-ni-i-in še-e-ni-iw-wə-ta*
> *ti-i-ḫa-nu-u-ul-li-e-it-ta* (23) *ú-ši-iw-wə-ú-un-na-ma-a-an*
> *šu-u-wə-ni-e-en-na it-ti-tén ú-ši-iw-wə-un-na-a-an* (24)
> *ti-i-ḫa-ni-tén*

'whereas[12] thus(?)[13] my brother's wife will come, and, thus(?), presents will be shipped to my brother, ...'[14]

In *ú-ni-e-it-ta* the future[15] of *una* will be found; properly analysed it represents *un-et(t)-a*.

A more precise interpretation of *ú-ú-nu-u-uš-ta-ma-a-an* (II 110) is prevented by the mutilated condition of the passage; it can however be gathered from what is left that it refers to ambassadors, and thus may very well mean 'go'.

The form *ú-ú-nu-uk-ka-la-an* compared with *unallan* displays an additional *-ukk-* after the root, about which nothing certain can be said as yet. The passage deals with 'messages' (*talami*[16]) and contains a nominal form in *-ta*. A 'word' (*tiwi*) is involved in IV 13.

Interesting for its form as well as its meaning is *ú-nu-u-u-ša* of I 86.

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[11] For III 11 see below p. 219; the text continues *in-na-a-ma-a-ni-i-in ú-ú-e-it-ta*. It is tempting, particularly in view of III 21 (see presently in the text), to restore by conjecture *ú-ú<-ni>-e-it-ta* 'she will come'.

[12] I do not see how the interpretation of *undu* as a conjunction 'when, whereas' can be avoided, since the word recurs in the Akkadian of the EA letters, of Boğazköy and of Nuzu. It was thus interpreted by Jensen (ZA 14 174, 177), but the misgivings of Messerschmidt (Mit.-Stud. 54) have not failed to impress others.

[13] If *undu* is a conjunction, *inna-* can only be a particle.

[14] For the continuation see below p. 220 f.

[15] Thus according to Messerschmidt, Mit.-Stud. 112f.

[16] The word appears in close connection with *tiwena* 'words, matters': *a-i-la-an ti-we-e-na an-ni ta-la-me-na* . . . (II 75); cf. furthermore IV 3, 7. In IV 15 we compare the idiom *talama tan-* with *tiwi tan-* 'fulfil a promise' (Messerschmidt, Mit.-Stud. 38) which precedes in IV 6 7. The word has nothing to do with RSh Ḫurrian *te-la-ma-e* 'great' (Syria 12 324ff. II 18) with which it has been combined by Lewy (Revue des Et. Sém. 1938 68 fn. 8 and 62 fn. 3). The Mitanni word for 'great' may be contained in *ta-al-la* DINGIR.MEŠ *e-e-ni-iw-wa-al-la-a-an* (IV 64), if this means 'my great gods' (*talla* from *tali/a-na* like *ulla* from *uli-na*, see Friedrich, Kl. Beitr. 6).

The context is as follows:

> *še-e-na-wə-ša-an* ¹*Ni-im-mu-u-ri-i-aš* (85) ....
>
> *ta-še ap-li ta-a-a-nu-u-ša* (86) ᵁᴿᵁ*I-ḫi-pè-ni* URU
>
> *Ši-mi-i-gi-ni-e-wə-ni-e-ma-a-an ú-nu-u-u-ša*
>
> 'your brother Nimmuriya made a great present with Iḫipeni; it became a city belonging to Šimigi'.

The rendering 'became' or 'turned' may seem bold, but it can hardly be avoided. The semantic development is easy enough. The form is a preterit, and should be analysed *un-uš-a*.

The stem recurs in the Boğazköy material. In KUB XXVII 17 3 and 8 *ú-na-am* (i.e. *una* particle *-m* = *-ma*) very probably means 'there comes (a deity)'; also VBoT 16 rev. 9, 10 may have contained pertinent forms[17]. Compare furthermore *ú-nu-u-lu-uk-ka-ma-an* KBo V 2 26.

From Ras Shamra *ún* of Syria 10 No. 7 3, if correctly isolated, may belong here; but this is quite uncertain.

In Kerkuk the stem is represented by a large group of proper names like *Un-Tešup, Unap-Tešup, Unaya*[18].

Messerschmidt[19] as well as Bork[20] have assigned to the verb *itt-* the meaning 'go'. If this is true, *itt-* should inflect and act like *un-*.

The close relationship of the two Ḫurrian verbs is made clear by IV 51f. where *itt-*—just as *un-* above—follows *nak-*:

> *še-e-ni-iw-wə-ú-ul-la-a-an pa-aš-ši-i-it-ḫi-iw-wə*
>
> *šu-ra-a-maš-ti-en na-ak-ki-en* (52) *it-ta-i-šal-la-a-an*
>
> ¹*Ma-ni-en-na-a-an še-e-ni-iw-wə-uš šu-ka pa-aš-ši-en* (53)
>
> *it-ta-in-na-a-an pa-aš-ši-i-it-ḫi-iw-wə-ra šu-ka*
>
> 'my brother may ....[21] my ambassadors (and) dismiss (them); let them go[22]! My brother may ...... dispatch Mane; .... let him go[22] together with my ambassador!'

The meaning 'to go' seems here very appropriate.

In two other passages the verb occurs in connection with Tušratta's giving his daughter in marriage to the Pharao:

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[17] Rev. 9 *ú-x-i-šal-la*(!) perhaps *ú-un-na-i-šal-la* which would recall *ittaišallan* (see presently). Rev. 10 apparently *ú-nu-sa*.

[18] Cf. Gustavs, Namenreihen aus den Kerkuk-Tafeln 43f.

[19] Mit.-Stud. 59.

[20] Mitannisprache 124 and passim.

[21] Cf. the suggestion of Lewy's in Revue des Ét. Sém. 68 fn. 8.

[22] The translation of *ittaišalla* and *ittainna* as imperative plural and singular respectively may be admitted here. The reasons for it will be presented in another connection.

un-du-ma-a-an a-ru-u-ša-ú-ú-un id-du-u-uš-ta-ma-a-an
še-e-ni-iw-wə-ta (III 2).
un-du-ma-a-an še-e-ni-iw-wə-ú-e-en aš-ti a-ru-u-ša-ú
id-du-u-uš-ta-ma-a-an (12) *še-e-ni-iw-wə-ta* (III 11f.).

In both cases the verb—extended by the suffix -*xšt*[23]—is construed with the nominal form in -*ta* which has also been found with *un*-.

Since Tušratta's letter apparently accompanied Taduḫepa on her way to Egypt[24], the following rendering seems appropriate:

'whereas I gave her, she is going[25] to my brother.'

'whereas I gave my brother's wife, she is going to my brother'.

In all these sentences the 'subject' is a pronoun. It may be argued that it is merely implied by the verbal form and needs no other expression. But whoever denies the existence of a particle -*man* 'and'[26], will be inclined to find the 'subject' in the final -*n* of this -*man*. In this respect, it is fortunate that a few examples with nominal 'subject' exist. In I 90 one reads:

a-ti-i-ni-i-in ta-še-e-en id-du-uš-ta

'now(?) the present is on its way'.

Here, *taše* 'present' is evidently in the *n*-form, a fact which confirms the isolation of a pronominal -*n* from the suffix -*man*.

A second case seems to be provided by II 6f.

in-na-ma-a-ni-i-in (7) ᴵ*Gi-li-i-an* ᴵ*Ma-ni-en-na-a-an*
ḫa-šu-u-ša-ú it-ta-aš-ša

The form of *itt*- which it contains may be described as a 'subjunctive'[27]; the sentence probably means:

'thus(?) I heard (that) Gilia (and) Mane go (on their journey)'.

There remains the passage III 23, quoted above (p. 217). It speaks of Tušratta's daughter coming to Egypt and of the presents she brings with her. Only a tentative translation[28] can be proposed:

'let her (i.e. the bride) go (on her way) for my own advantage(??)!

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[23] The initial vowel of the suffix is subject to vowel harmony; see Heinr. Winckler apud Bork, Mitannisprache 53.

[24] Is this the reason for its being composed in Tušratta's native tongue?

[25] One may consider whether this is the force of the *št*-form of the verb.

[26] Cf. LANG. 15.252-3.

[27] Cf. Messerschmidt, Mit.-Stud. 36.

[28] The sentence presents various difficulties: (1) the verbal form in -*iten*; I interpret it as -*et-a-in*, i.e. *it-ti-tén* as the 'future' of *ittain*; (2) the noun *uši*-. Bork's rendering 'Karawane' (AfO 8 309) is unacceptable to me; I must call attention to *ú-u-ši-ip* KUB X 63 II 10 which is in parallelism to *ki-il-ta-ap* 'thy well-being' and I furthermore refer to *ana ḫidūti* 'for joy' in EA 29 157 and 27 97.

Let them (i.e. the presents) go out for my advantage(??)!'[29]

Outside the Mitanni letter the word *itt-* occurs only rarely. From Boğazköy there must be quoted *it-ti-ú-pí-in* (KBo VI 33 = KUB VIII 61 I 11[30]), probably 'let him not go'. It may also be contained in the Kerkuk name *It-ti-šarri*[31] which, though rather isolated within this group, is hardly Akkadian.

As far as the evidence[32] goes, *itt-* indeed inflects and behaves like *un-*. Hence, it can be stated in conclusion, that in Ḫurrian, exactly as in Urarṭean[33], two main types of sentences exist: a transitive type where the agens is expressed by the *š*-form and the affected person or object by the *n*-form; and an intransitive type where the *n*-form refers to the person or thing who or which is involved in some event. In other words, Ḫurrian shares with Urarṭean the passival orientation of the verb.

[Postscript: While this article was on the editor's desk a paper by E. A. Speiser 'Studies in Hurrian Grammar' was published in JAOS 59. 289–324 (1939). Speiser's opinions came to my knowledge after the manuscript was out of my hands (cf. Speiser's fn. 26 on p. 296). Coincidences, both in principle and in detail, are therefore accidental and may serve as an indication of the correctness of the views we have both set forth independently.]

[29] In other words, Tušratta expects an advantageous return from his generosity.

[30] Cf. Ungnad, ZA NF 1 133ff. and in particular 137.

[31] E.g. JEN 78 35; 290 47; AASOR XVI 61 43; in all cases mentioned as father of the scribe TAR-mi-te-šup. The name is hardly Akkadian; for the element *šarri* see Goetze, Annalen des Muršilis 226ff.

[32] A few additional forms in -*a* will be dealt with elsewhere.

[33] Friedrich, Caucasica fasc. 7 54ff.

THE PRONUNCIATION OF LATIN *qu* AND *gu*

E. H. Sturtevant

Yale University

When the Greeks borrowed the alphabet they took over the Semitic *qoph* as well as *kaph*, and they employed the former before back vowels (e.g. Corinthian ἳϙομες, ϙαϙόν), but in the course of time ϙ was crowded out by κ. Scholars have inferred that the extra letter served no useful purpose, because there was no phonemic difference between κ before back vowels and in other positions. Similarly the Etruscans borrowed both ϙ and κ from the Greeks, and on some early Etruscan inscriptions the use of *q* is limited in the same way as Gk. ϙ, while *k* is used only before the vowel *a*.

Etruscan, having no voiced mutes, employed *c* (from Gk. Γ) as a voiceless velar mute, and in later Etruscan this character crowded out the other two. Again we may infer that early Etruscan *q*, as well as *k*, did not represent a different phoneme from *c*.

Early Latin inscriptions also show the three letters *c*, *k*, and *q*, and there is a tendency to distribute them in the early Etruscan manner. In the course of time *k* dropped out of standard use except in a few abbreviations, and again we infer that there was no phonemic distinction to be denoted by *k*. Standard Latin orthography, however, retained *q* in the digraph *qu*. We may therefore suspect that this digraph denotes something different from the sound of *c* plus the sound of consonantal *u*.

Some of the Roman grammarians, to be sure, thought that *q*, as well as *k*, was a superfluous letter,[1] but their testimony about *q* is worth no more than the statement that *h* is a superfluous letter since it is a breathing (*aspiratio*); what these authors really have in mind is that the standard Greek alphabet has just one letter where the Latin alphabet has *c*, *k*, and *q*.

Velius Longus 7.75.10 f. K suggests that *qu* was written instead of *cu* for the purpose of distinguishing words that would otherwise have been homographs:

[1] E.g. Quintilian 1.4.9; Marius Victorinus 6.8.16, 33.28–30 K; Ps-Sergius 4.520.24–6 K = Goetz and Schoell, Varro 200.11–13.

Aquam quoque per *q* scribentes nomen ostendimus, per *c* vero verbum ab eo quod est *acuo, utinam acuam.*

In this case and a very few others (e.g. *qui : cui*) the use of *q* did provide an orthographical distinction; but it is incredible that for this reason *qu* was written instead of *cu* in the far more numerous words in which a misunderstanding would have been impossible.

It would, in fact, be very difficult to explain how the digraph *qu* got established in Latin orthography unless it was phonetically preferable to the writing *cu*. And there is clear evidence that *qu* is a single consonant rather than a consonant group.

(1) Several of the grammarians make a phonetic distinction between ordinary consonantal *u* and *u* after *q*. Velius Longus, 7.58.17–20 K, finds that consonantal *u*, except where it is run together (*confusa*) <with *q*>, is spoken with some breath (*cum aliqua adspiratione*). Donatus, 4.367.16–18 K, says: V littera interdum nec vocalis nec consonans habetur, cum inter *q* litteram consonantem et aliquam vocalem constituitur, ut *quoniam, quidem.* Pompeius, 5.104.16–25 K, says even more explicitly that in such a word as *quoniam u* is neither vowel nor consonant but is merely *pars litterae praecedentis.* This clear statement is wrapped up in some extraordinarily foolish verbiage, but that is no reason for neglecting a plausible piece of testimony.

(2) Furthermore Varius Victorinus, 6.34.1–3, in contrasting *q* with *c* or *k* (opinions differ as to which), says: Quarum utraque exprimi faucibus, alteram distento, alteram producto rictu manifestum est. 'It is clear that each of them is produced in the throat, one with the lips open wide, the other with the lip-opening protruding.' This amounts to saying that the lip-rounding for *qu* is synchronous with the closure for the mute.

(3) It is common knowledge that *qu* does not make position; the first syllable of *aqua* and of *equos* is regularly short in Latin poetry of all periods. This is in sharp contrast with the behavior of the few real consonant groups with *u* consonant as second member; *adversus, obversus, obvius, silva, parvus, pervius,* etc. have long initial syllables.

(4) Final *m* becomes *n* before a dental in such words as *quando, eundem, eorundem,* and final *m* becomes *n*, i.e. [ŋ], before *c* in *nunc, hunc, hanc, horunc, harunc;* but final *m* remains before *qu* in *quemquam, quamquam, equomque, quīcumque, umquam, numquam.* In spite of *eundem, hunc,* etc., one might argue that *m* in *quemquam, equomque,* etc., is analogical, but no such explanation is available for *umquam* and *numquam.* We must conclude that the lip-rounding began with the

beginning of the closure for the mute, and so there was no tendency to alter a preceding labial nasal.   Of course it was the coincident velar closure that prevented the change of a preceding *n*, i.e. [ŋ], to *m* in such words as *inquam* and *longinquos* and that caused the change of preceding *n* to [ŋ] in *inquiēto, inquīro*, etc.   In such words as *conquasso* and *conqueror* we also have change of *n* to [ŋ] rather than of *m* to [ŋ].

The inescapable conclusion is that *qu* was a true labiovelar, i.e. a velar mute with synchronous lip-rounding.   Such sounds are not rare in the languages of the world; many American Indian languages, for example, possess them.   Of course the lip-rounding in such a sound may persist after the release of the occlusion for any length of time up to that of a normal [w],[2] and there is no available evidence to determine whether in Latin *qu* the lip-rounding ended simultaneously with the *k*-occlusion.   We know merely that it began with the occlusion and that it did not persist long enough after the end of the occlusion to make the interval metrically long; but it may have lasted about as long as the *r*-vibration lasted after the end of the *t*-occlusion in the group *tr*, for *patrius* has a short initial syllable in early Latin and normally in later Latin also.

I was formerly convinced[3] that a [w] after the [k] must be assumed for Lat. *qu* on account of the parallel development of early *bovom* to *boum*, *parvom* to *parum*, etc., and of *quom* to *cum*, *equos* to *ecus*, etc.   The conclusion, however, does not necessarily follow; if the change of *o* to *u* involved dissimilative loss of a preceding [w], it may at least as easily have induced loss of lip-rounding in a preceding labialized *k*.

Since Latin nonsyllabic *gu-* always follows a nasal no evidence on its length can be got from verse.   Neither does the process of composition ever bring *m* to stand before *gu*.   The only reason for supposing that the digraph represents *g* with synchronous lip-rounding is the parallelism with *qu*.   But, lacking other evidence, this is the more probable conclusion.

[2] English *qu* is generally transcribed [kw], but the lip-rounding seems to begin with the [k] in the pronunciation of some speakers.   It persists for an appreciable time after the release of the occlusion, and gradually takes on voice in preparation for the following vowel.   Cf. Alexander J. Ellis, On Early English Pronunciation 1.208; Daniel Jones, An Outline of English Phonetics 134.

[3] Pronunciation of Greek and Latin 40, 44.

THE ALLEGED 'MURMELVOKAL' IN OLD ITALIAN

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The theory that there was a spontaneous development of an obscure vowel in final position on certain occasions in Old Italian has gained general currency and has been carried on in the works of the main authorities. D'Ovidio and Meyer-Lübke speak of a 'Murmelvokal' and consider it to have been an obscure vowel of [ə]-quality; Grandgent refers to it as a 'glide-vowel' without further definition of its phonetic timbre. Such a vowel, represented in writing by -*a*, -*e*, -*i*, or -*o*, is presumed to have arisen under the following circumstances:

1. After final -*r* or -*l* of a Latin monosyllable (*cŏr, fĕl, mĕl*).[1]

2. After the final vowel of oxytone words ending in a vowel—whether verb-forms or other parts of speech.[2]

3. After the final consonant of oxytone learned or loan words.[3]

4. In the 3rd pl. verbal termination *-ano, -ono* in all verbs.[4]

In all these cases, however, such an assumption meets with difficulties, and it is the purpose of this paper to point out the possibilities for explanation by other means, primarily by the assumption of analogical influences. The various occurrences of the alleged 'Murmelvokal' will be treated in accordance with the grouping indicated above.

1. Final -*e* is present in *fiele, miele, cuore* < *fĕl, mĕl, cŏr*, as well as in *sale* < *salem* : *sal*. Despite the evidence of the latter indicating analogical reshapement, Gröber[5] and Grandgent[6] have denied derivation of this group of words from **fellem* (**felem*) etc. Nevertheless, there is clear evidence of the presence of -*e* in these words in Vulgar Latin, as

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[1] D'Ovidio and Meyer-Lübke, in Gröbers Grundriss 1.693 (2nd ed., Strassburg 1904–6; hereinafter abbreviated as GGr²); Meyer-Lübke, Grammatica storica della lingua italiana 116 (tr. Bartoli and Braun, Torino, 1931; hereinafter referred to as ML-Bartoli); Grandgent, from Latin to Italian 76 (Cambridge, 1927; hereinafter referred to as Grandgent).

[2] D'Ovidio and Meyer-Lübke, GGr² 1.674; ML-Bartoli 80; Grandgent 48, 72.

[3] ML-Bartoli 113; Grandgent 14.

[4] ML-Bartoli and GGr²., loc. cit.

[5] ZRPh 24.159 (1901).

[6] Grandgent 76.

shown by the cognates in Roumanian (*fiere, miere, sare*) and Sardinian (*fele, mele, sale*),[7] in which languages -*e* is regularly preserved. The final -*e* in these cases was not spontaneous, but present in Vulgar Latin, and must have originated from the analogy of other third declension nouns in -*e*.

2. Following an oxytone final vowel, we have frequently—but by no means always—an additional vowel in Old Italian. These additional vowels form an extremely heterogeneous group (-*a*, -*e*, -*i*, -*o*); two or more of them frequently occur as alternative finals for the same form. These occur in:

a. Verbs:

I. Present 3rd sg., in monosyllabic forms—*èe, fae, sae*, etc. These forms, if not mere graphs (to indicate their accented nature), may be explained as containing an addition of -*e* to the normal forms *è, fa, sa*, etc., starting from *dee* < *debet, hae* < *habet* (North Italian forms, see ML-Bartoli 189, 101). *Este*, if not a South Italian or a learned form, is explicable on the same basis (cf. Millardet, Dialectologie et linguistique romanes 86).

II. Perfect 3rd sg. The first conjugation frequently, but by no means universally, shows -*òe*, -*òa* beside -*ò*; the fourth conjugation, -*ie*, -*io* beside -*i*. In this group of words, final -*e* entered by analogy because of its presence in strong perfects with *-e* < *-it*, and in *fue*, normal from *fuit*. The final -*a* in -*òa* came by analogy from the imperfect in -*ava*; for other examples of spread of an ending from one tense to another, cf. the spread of -*i* to the 2nd singular of all tenses,[8] and the later transference of -*o* from the present to the imperfect in the 1st singular. -*Io* is the normal phonetic development of -*iyt*, parallel to the development of -*ò* < -*òo* < -*òyt*;[9] due to the identity of the alternative 1st and 3rd singular perfect terminations in -*ii*, -*i* in the fourth conjugation, -*io* spread occasionally to the perfect 1st singular—where, however, it is considerably rarer in occurrence than in the third person.

Final -*o* and -*e* came to be regarded as almost interchangeable in verb-forms in the perfect, and we have forms such as *fusso* (Sacchetti) for *fosse, fusse*, where there can be no question of a 'Murmelvokal'. The above assumptions of analogical influence are also rendered more likely

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[7] REW[3] §§3234, 5469, 7521.

[8] Grandgent 158.

[9] Caix, GFR 1.229 (1878), Origini della lingua poetica italiana 228 (Firenze, 1880); Gaspary, ZRPh 3.623 (1879). Caix seems to have been the first to oppose the theory of the 'vocale d'appoggio' in this connection, favoured by Diez and Delius.

by the exceptional state of analogical flux of the Old Italian verb-system in other respects (cf. Caix, Origini 215–216; Grandgent 149–153).

b. Pronouns:

I. 2nd sing. *tue, tuo*. These have been explained by Bruner[10] as showing development of an 'off-glide'; Meyer-Lübke, however, explains *tuo* as showing *-o* under the influence of *io*,[11] and *tue* shows a substitution of *-e* for *-o* on the model of the equivalence of *-e* and *-o* alluded to above.

II. 1st plur., 2nd plur. *noi, voi*. Here we have simply the plural suffix *-i*.[12]

c. Adverbs: *piùi, mai = più, ma*. Here 'adverbial *-i*'[13] furnishes the best explanation. We find also occasional substitution of *-e* for *-i* in *piùe*.

Grandgent attempts to give more life to the hypothetical 'Murmel-vokal' by assuming (48) that it was assimilated to following consonants and was the origin of the lengthened consonant heard (and in part still written) in sentence-sandhi in such cases as *amòllo, dimmi, piuttosto*, etc. It is generally considered, however, that this type of consonant length-ening results from assimilation, not of a vowel to a consonant (a rare and unlikely occurrence), but of a final Latin consonant to a following initial: *amòllo < amavit (amáṵt) 'llum, dimmi < dic mihi*, etc.,[14] and in other cases from normal consonantal doubling in Tuscan following a short tonic vowel: *dammi < dǎ mihi*, etc.[15] This latter explanation will fit also the long consonant of such forms as *danno, stanno* (cf. ML-Bartoli 186 and below).

3. In the case of foreign or learned words ending in a consonant (*David[de], omnibus[se], lapis[se]*, etc.), Tuscan phonetic habits do not permit of words ending in a consonant, and it has been claimed that we have here also a 'Murmelvokal' of spontaneous origin. However, that the added vowel is primarily a morphological element (serving also the

[10] MLN 8.97–99 (1893).

[11] ML-Bartoli 160.

[12] The theory of *-s > -i* (Grandgent 77; ML-Bartoli 116) does not seem at all tenable, and Pușcariu's demonstration of analogical origin of *-i* in all such cases in Italian and Roumanian (Studii și notițe filologice, Convorbiri literare 25.211) is preferable. Grandgent's comparison of Andalusian *-h* is not to the point; in Andalusian and American Spanish, when *h̄ (< s)* disappears, it is either assimi-lated to the following consonant (*mimmo < mismo*) or disappears without a trace (*lo biyete < los billetes*).

[13] Grandgent 51 f.—from which, however, we should of course omit considera-tion of words with *-i* allegedly from *-s* as part of this theory.

[14] Cf. discussion by Norman, Italica 14.59 (1937).

[15] ML-Bartoli 113.

purpose of adaptation to native phonetic pattern) is proven by the fact
that not only -e (by analogy with third-declension nouns), but also -o
is frequently added, by analogy with second-declension nouns (*omni-
busso, lapisso*; Old It. *Pirusso, Satanasso*;[16] *straniero*, and other words in
-*iero* beside -*iere*); and, significantly, these are the only two vowels ever
added to singular nouns in this category.

4. The -*no* (unaccented) of *cantano, dicono, sono*, etc., is a normal
phonetic development of a much earlier analogical substitution. The
various explanations with recourse to 'vocalischer Nachklang'[17] or to
analogy[18] (all rather roundabout) have been rendered unnecessary by
Förster's suggestion[19] that this -*no* originated in the Latin alternative
forms in -*nunt* for the third plural of the present of certain verbs, such
as *dănunt* (> *danno* by normal phonetic development, see above),
explenunt, prodinunt—of whatever origin these latter forms may be.[20]

A further objection to the 'Murmelvokal' theory lies in the diversity
of the representation of the alleged obscure vowel: -*a*, -*e*, -*i*, -*o*. Had
there been actually a separate phoneme of different quality from that
of other vowels, we might have expected a more uniform graphic repre-
sentation; even in the earliest Old French, the [ə]-vowel was represented

[16] Grandgent 14.

[17] Meyer-Lübke and d'Ovidio, GGr² 1.684 (where the theory of 'vocalischer
Nachklang' is carried to its logical reductio ad absurdum, with the admission
that we should normally expect -*a* in the first conjugation and -*e* in the second,
as in Sardinian 'Nachklang'; rightly criticised by Förster, ZRPh 22.521 ff. [1898]).

[18] ML-Bartoli 118; Grandgent 79, 160 without recourse to 'Murmelvokal'.

[19] ZRPh 22.521–525 (1898). The Italian school have not accepted this theory;
cf. d'Ovidio's answer, ZRPh 23.213–220 (1899); Merlo, StR 6.69–83 (1909).
D'Ovidio's answer, although generally prevalent, is not acceptable; it is based
simply on a dislike for considering OLat. forms in connection with Romance
philology (cf. such terms as 'rancido', etc., applied to OLat.) and on an objection
to -*nn*- < -*n*- after short tonic vowel (which, however, is normal in Tuscan, cf.
ML-Bartoli 186). D'Ovidio's suggestion of ´-*ono* (whence, by analogy, ´-*ano*), with
-*o* < -*unt*, taken over from the strong perfect, runs contrary to the normal lines
of analogical force. It is from more common tenses such as the present to less
common tenses such as the perfect that analogical transference usually takes
place; cf. 1st sing. -*o* from the present to the imperfect, etc. It was for this
reason that Baist refused (ZRPh 16.532 [1892]) to consider the final vowel of Sp.
soy, OSp. *soe* as by analogy from the perfect *fui*.

[20] Pieri's attempt (Riv. d'istruzione e di filologia classica 33.495–497 [1905]) to
explain away *danunt* as showing merely alteration of the root *da*- with -*n*- from
donare, and the other verbs in -*nuni* as based on the analogy of *danunt*, seems
unjustified in view of the OLat. attestations of the -*nunt* forms (e.g. in Plautus)
and related phenomena in other IE languages; cf. the discussion by R. M.
Bechtel, LANGUAGE 13.181 (1937).

only by -*a* (under learned influence) and -*e*, and *e* soon came to be the normal graph for this phoneme.[21]

The concept of a spontaneous 'Murmelvokal' is vague and undefined, and the cases in which it is alleged to have occurred are, as pointed out above, of various types. If only one phoneme is assumed to have existed, no satisfactory explanation can be offered for its later loss in some cases (Mod. It. *fu* to OIt. *fue*, *sa* to OIt. *sae*, etc.) and various developments into -*o* (*straniero*), -*i* (*mai*, *noi*) and -*e* (*miele*; *omnibusse*) in others. But assumption of more than one phoneme ($ə_1$ developing spontaneously and disappearing later equally spontaneously; $ə_2$ developing spontaneously and remaining as -*e*; $ə_3$ coming from -*s* and developing into -*i*, etc.) leads to infinite possibilities of subdivision, and to the very inadvisable procedure of setting up separate hypothetical phonemes to explain individual phenomena.[22] It is better to discard completely the hypothesis of a spontaneous 'Murmelvokal' and to assume instead a multiple origin, primarily by analogy, of the additional final vowels in the situations discussed above—i.e., an adaptation of essentially morphological order; especially since Tuscan phonetic habits are not now and do not seem to have been in the past conducive to obscure vowels.

[21] Cf. Rydberg, Geschichte des französischen ə.

[22] Cf. the criticisms made of Bovet's hypothesis of a special [Δ]-phoneme to explain *andare*, *aller*, etc. < *ambulare* (Scritti in onore di Ernesto Monaci 243–262 [Rome, 1901]), by Paris, Rom. 31.606–607 (1902); Gröber, ZRPh 26.639 (1902); Salvioni, Arch. Glott. It. 16.209–210.

THE HISTORICAL USE OF THE PRESENT IMPERFECTIVE AND THE PRESENT PERFECTIVE IN RUSSIAN

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In his very valuable book, Emplois des aspects du verbe russe (Paris, 1914), Prof. André Mazon analyses the various usages of the perfective and imperfective aspects and in connection with the present forms of both, he has a section on the Historical Present of the Imperfective (123–5) and on the Historical Present-Future or Present Perfective (149–59).   Both of these sections deal with a very striking phenomenon of some portions of the Russian language.   On the whole, he has handled the matter very carefully, but perhaps it may be possible to look at some of these cases a little more closely.

The majority of the examples found in this volume are drawn from a restricted list of works, i.e., The Tales of Afanasyev, the Memoirs of a Sportsman of Turgenev, the Tales from Sevastopol of Tolstoy, the Storm of Ostrovsky, the Little Demon of Sologub, and some collections of proverbs, dictionaries, etc.   These represent a fair survey of the Russian literature of the nineteenth century with certain important exceptions as poetry, Pushkin, Lermontov, etc.

Let us therefore supplement this list by looking first at a few references from Pushkin which Mazon cites and discusses, particularly as to the present use of the present perfectives.   Thus (133) he says 'Cette valeur de futur du présent perfectif se constate avec une rigueur absolue pour tous les verbes perfectifs sans exception.   Un très petit nombre d'entre eux toutefois—et nous ne voulons point parler ici des verbes témoignant d'une dualité d'aspect réelle, c'est-á-dire susceptibles de posséder un futur périphrastique—offre, en quelques cas très rares, la valeur de présent, a savoir *padu, daruyu, konchu,* et *ryeshu.*'   He then cites three passages from Pushkin.

The first of these is from the Evlega, a poem written in 1814, and it may repay us to reprint the entire stanza from which Mazon quotes two verses.

On podnyal mech, i s trepetom Evlega
Padyot na dyorn, kak klok letuchiy snyega,
Metelitsey ottorzhennyy so skal.
Drug na druga soperniki stremyatsya,
Krovavyy tok po kamnyam pobyezhal;
V kustarniki s otchayan'em katyatsya.
Poslyedniy glas Evlegu prizyval—
I smerti khlad ikh yarost' okoval. (Ed. Ladyzhnikov 1.19)

It is very hard to see why Mazon singles out *padyot* for special comment in this stanza. It is sufficient to note the forms of the seven finite verbs in this passage. They are respectively and in sequence: past pf., pres. pf., pres. impf., past impf., pres. impf., past impf., past pf. In each case the verb refers to a past action and these actions follow in temporal sequence. The entire difference between the imperfective and the perfective aspects is contained in the very nature of the aspects, i.e., the imperfectives, whether present or past, definitely indicate a repeated or a continuing action. The perfectives, whether present or past, definitely represent a non-continuing or a completed action. Thus in this passage the historical use of the different forms is exactly what it would be, had all the verbs been in a past tense.

In the second passage from Ruslan and Lyudmila, the confusion is greater, for Pushkin is endeavoring to picture here the simplicity of the folk tale. In a space of ten lines from which the passage of Mazon is cited, there are four present imperfectives, one present perfective, and one past perfective, which really sets the key for the scene.

In the third instance from Poltava, the passage is more consistently in the present tense and there are only a few verbs which are definitely anterior to the time of action in the past. This is not true of the whole poem, where we find the same mixture of pasts and presents, although as a piece of literature representing the higher classes of society, the confusion is not so evident.

An examination of such a poem as Evgeniy Onyegin, Pushkin's great verse novel, shows relatively fewer cases of this inexplicable confusion and fondness for historical presents of both kinds than do the Skazki of the same author. It might easily be objected that in these cases we have to do with poetic license or with restrictions that were imposed upon the poet by his metre, but these objections can hardly be valid when we look at other cases.

The same phenomenon characterizes the fables of Krylov, which are commonly regarded as an extremely natural form of ordinary Russian colloquial speech. To cite but one instance in the fable The Oracle, Book I, No. 9)

> Kak vdrug,—O chudo, O pozor!
>   Zagovoril orakul vzdor;
> Stal otvyechat' neskladno i nelyepo;
> I kto k nemu za chyem ni podoydyot,
> Orakul nash chto molvit, to sovryot.

The fable after this reverts to the past tenses and so continues to the end.   In nearly every case in Krylov, the beginning and the ending are in the past, and any historical presents of either aspect are in the middle of the fable.

When we turn to the prose of the Memoirs of a Sportsman of Turgenev, we find many examples of this same usage.   Let us take for example, *The District Physician*.   The bulk of the story consists of a narrative by a country physician and in his tale he is constantly shifting from the historical forms to the present and the past, quite without any rule or reason.   Thus in speaking of a general case where the disease Poprobuyesh—nyet, ne ono.   Ne dayosh' vremeni lekarstvu, kak slyeduyet, podyeystvovat' . . . to za to khvatish'sya, to za to.   Voz'-myosh', byvalo, retsenturnuyu knigu . . . vyed' tut ono, dumayesh', tut.   Pravo slovo, inogda na-obum raskroyesh', avos', dumayesh', sud'ba . . .   I Aleksandra Andreyevna ko mnye privyazalas'; nikogo, byvalo, k sebye v komnatu, kromye menya, ne puskayet.   Nachnyot so mnoy razgovarivat',-razsprashivayet menya (op. cit. 78).

When we look at the narratives and the conversation in the longer novels of Turgenev in which the characters are drawn from the higher society of the day, the aspects are used in the conventional style of the average grammar and we do not find this strange juxtaposition of presents and pasts.

With Tolstoy we are in the same position.   In his peasant tales like those quoted in the Russian Reader by Boyer and Speransky (ed. Harper, University of Chicago Press), we find the same type of construction.   Let us take for example the story, Peter the First and the Peasant (77 ff.): Nayekhal Tsar' Petr na muzhika v lyesu.   Muzhik drova rubil.   Tsar' govorit . . . Muzhik i govorit . . .   Tsar' sprashivayet . . .   Tsar' podumal i ne znayet . . .   Syeli oni na odnokolku, poyekhali . . .   Stal dorogoyu Tsar' muzhika sprashivat'.   Vot priyekhali v pole.   Uvidal narod Tsarya, vsye posnimali shapki.   Muzhik pyalit glaza, a ne vidit Tsarya.   Vot on i sprashivayet . . .   Govorit yemu Petr Aleksyeyevich . . .

It will be noted here that all the conversation is introduced by verbs in the present tense.   Such phrases as *On prishol i govorit* are very common in Russian and there are many cases where the perfective *skazhu* is found where we would normally expect the present imper-

fective.   It is however usually possible to draw a differentiation of aspect in these cases.

When we turn to the archaistic prose of Remizov, we similarly find ourselves confronting such a confusion.   On the other hand in some of the better Soviet literature as the Quiet Don of Sholokov or One-storied America of Ilf and Petrov, the tenses are used quite consistently as we should expect them to be.

In folk tales and above all in the byliny, there is the same confusion. Thus in the bylina of Ilya of Murom at Chernigov, we read:

> Tut vozgovorit Il'ya Muromets takovo slovo . . . .
>
> Beryot on v ruki sablyu boevuyu,
>
> Uchal po silushkye pogulivat';
>
> Gdye povernyotsya, dyelal ulitsy,
>
> Povorotitsya—chasti ploshchadi,
>
> Dobivayetsya do tryokh tsarevichev. (ed. Lyatsky 29)

Similar examples could be quoted from almost every one of the byliny and the historical songs of Russia.

The interpretation of these phenomena is by no means simple and undoubtedly requires the collection of much more material from various authors and folktales.   All the evidence points to its use as a feature of a real or pseudo-peasant style.   If it is merely a question of style, it may of course have no real linguistic interest.   It is, however, something that can be found in so many authors that we must perhaps seek for another explanation, especially in view of its widespread use over a long period of time.

Mazon (op. cit.) endeavors to classify many of these cases by creating certain classes for them and is inclined to emphasize the fact that they form a sort of historical present or historical present future.   On the other hand, they seem to be used to prevent the accumulation of too great a number of past tenses.   Perhaps the failure to distinguish person in the past, where the old tenses, aorist and imperfect, have completely vanished and been replaced by the one participle in -l without any finite part of the verb, may have influenced this.

Perhaps again the lack of strict rules of sequence of tenses, as we find them in Latin, and the consequent looseness of Russian sentence structure, has developed in popular usage a tendency to use each verb or each phrase as an independent entity.   We might almost call this a metaphysical point of departure, whereby certain words and phrases are grouped around an idea which shifts from moment to moment, a progression in thought by instantaneous pictures and not a strict temporal relationship as we find it in English and other languages where

all the verbs are rigidly related to each other in a strict temporal order.

A third explanation is perhaps the most probable. That is a recognition of a relative weakness of emphasis on the temporal element in all finite forms of the verb. We notice that the passages where these historical forms are found most frequently are also those where the full force of the different aspects is felt most keenly. Whatever be the confusion between tenses, there is never any between aspects. The full force of the imperfective is felt and the full force of the perfective is employed where there is no emphasis on the passing details of the action recorded by the verb.

For the Russian author, it is alternation of aspect that is important, not the strict tense force of the present-future. We would not go so far as to say that there is fundamentally no future force in the present-perfective or present-future, but that future force is probably not primary or fundamental in the verb. Hence we have such clearly recognized usages as the gnomic present-future (like the Greek gnomic aorist), cf. Mazon 145.

In any extensive use of a present perfective with its full force of describing action which is not to be treated as continuing, the still swiftly passing present tends to throw it either into the future or the past. If we have the former, we have the normal use of the verb. If the latter, we are dangerously approaching the historic present-future, to use the terminology of Mazon. We may therefore postulate that the present future can be used at any time to denote almost a present, if only the emphasis is laid upon the conditions that are felt to be inherent in the perfective. Likewise too for continuing details the present imperfective seems more colorful than the past imperfective. This would explain the usages in the byliny, where any crisis or climax tends to come into the present tense.

On the other hand, wherever the influence of the schools and of European stylistic conditions takes the supremacy, as it has done in formal Russian grammar from the Middle Ages when the work of Donatus was translated to serve as a basis for study, the temporal significance of the aspect has, so to speak, taken precedence over the aspectual qualities. Under these conditions, the authors have tended to follow very rigidly the tense rules as they have been formally applied to the Russian forms.

There has not been collected sufficient material to study these questions, and undoubtedly for a thorough statement of the situation it would be necessary to trace the aspectual developments not only in old Slavonic but through the various Slavonic languages. The remark of A. Musić (Zum Gebrauche des Praesens Verbi perfektivi im Sla-

vischen, Archiv für sl. Philologie, 24.479–514) is probably correct: Wenn
... im Slavischen das Praesens verbi imperfektivi auch zur Verzeichnung
einer ausserhalb der Gegenwart des Sprechenden vor sich gehenden
Handlung (oder kürzer: auch zeitlos) gebraucht wird, so werden wir das
slavische Praesens verbi perfektivi nur in den Fällen gebraucht finden,
in denen das Praesens verbi imperfektivi zeitlose Bedeutung hat (480).

On the other hand it must always be remembered that in Russian
there has always been from the time of Lomonosov a strong tendency to
model the language and the literary style upon Western models and the
Western languages in which tense plays a stronger rôle than aspect.
How to do this with such a mutilated tense system had been a problem,
and at present the accepted solution is to emphasize the tense values
of the aspects over the aspectual uses. If this is true, we can well
understand why the abnormalities of tense usage have been greater in
those works which aim to reflect the popular manner of speaking, and
we can predict that the time will come when the grammarians and
teachers will have their way and when the Russian language will con-
sistently regard the present-future as a real future. That is the trend
of modern Russian literature and practice and the passages which we
have here cited will then remain by themselves as a belated remnant
of what was once a very important element in Russian colloquial and
literary usage.

POTAWATOMI SYNTAX

Charles Hockett

1. Students of American Indian languages have given little attention to syntax.[1] This neglect may be partly explained, though not justified, by the fear of imposing arbitrarily on exotic languages a set of concepts derived from intensive study of the more familiar Indo-European tongues. The possibility of error due to preconceptions is certainly real, especially for those who venture first into new territory. Perhaps the present paper will serve to stimulate more activity in this extremely interesting and important phase of linguistic science.

Potawatomi is a Central Algonkian language, related to, but not mutually intelligible with, Menomini, Fox, Ojibwa, Cree, and others. The writer has heard it spoken at a number of scattered points and there seem to be no phonologically differentiated dialects.[2] The transcription in the present article is phonemic.[3] Above the level of segmental phonemes, the phonological units are the WORD, indicated by spacing, the SENTENCE, indicated by a period at the close, and sometimes an intermediate group, the PHRASE, which is marked by a comma at the end when it is not in sentence final position. Hyphens join elements which are phonologically comparable to words except that they are not free forms. Apparent discrepancies in transcription are

[1] This remark is based on the published material; there is probably a great deal of syntax in the files of Americanists. Perhaps the most important printed data are those given from Menomini in Bloomfield's Language.

[2] Field work was done in the summers of 1937 and 1938 on grants from the Social Science Research Council. In the autumn of 1938, while working with the Oklahoma Kickapoo on a grant from the Institute of Human Relations of Yale University, a small amount of time was spent on checking the local dialect of Potawatomi. During the Spring of 1939 the material gathered was organized into a monograph entitled 'The Potawatomi Language', which was submitted to the Faculty of the Graduate School of Yale University as a Doctoral Dissertation; work during that period was supported by the American Council of Learned Societies. The present paper is a reorganized extract from the above mentioned dissertation.

[3] The orthography is that generally in use by Americanists today, except that the symbol j is used instead of y for the semivowel like the first phoneme in the English word 'you'.

due to sandhi changes; '*k·wɛ*' for 'woman' in phrase medial, but '*kwɛ*' in phrase initial.

Syntax deals with the formation of free forms from free forms, as morphology deals with the formation of free forms from bound forms and of bound forms from bound forms. This essential contrast is not invalidated, for Potawatomi, by the presence of many single words containing relationships comparable to those found, in other cases, between words. The justification for this last statement will appear in due course. On the basis of inflection and syntactical use five parts of speech may be recognized; noun, verb, numeral, substitution, and particle; specific morphological information about these will be supplied, when requisite, in what follows.

2. There is an important stylistic contrast in Potawatomi between CONVERSATION and NARRATION. Ordinary conversation is the give and take of words which accompanies, rather than replaces, everyday activity. Narration is the monologue style of an individual telling a story, be it about himself or about a mythical hero, the only requirement being that the stream of speech coming from that individual is the thing of central importance at the moment, rather than an accompaniment for something else. Conversational style is marked by the predominance of two of the modes of the verb, the indicative and imperative, and by a partial or complete disappearance of the distinction between comma and period intonations (§1). Narrative style, on the other hand, has the narrative mode as its principal mode of predication, and commas and periods are clearly distinguished. Where indicative and imperative forms appear in narration they are in quotations or parenthetical comments (§18).

Most of the texts on the analysis of which the present paper is based are stories in narrative style. Many important details of conversational style are not yet known to the writer. Therefore what follows must be taken to apply primarily to syntax in narrative style.

3. The unit of predication is the CLAUSE. A clause contains one or more words; a sentence (§1) consists of one or more clauses, but is never less than a clause. Clauses are MINIMAL or FULL. A minimal clause consists of a single word, which is either a noun used vocatively, a particle, or an interjection. A full clause is EQUATIONAL or REGULAR. Either of the latter may be COMPLETE or ELLIPTICAL, except that an IMPERATIVE clause, which is a subtype of regular clause, is always complete. A full clause is the same thing as a PREDICATION, which is

the same thing as an INDEPENDENT NEXUS[4]; but there are clauses which are not predications, and nexuses which are not independent and therefore neither predications nor clauses.

As examples of minimal clauses may be given the following:

nməš·o. 'Grandfather!' (calling)

čo ntəkk·ɛntas·in, nmɛš·o. 'I don't know, grandfather.'

kɛko. 'Don't!'

kɛko, kin kkə-ns·əčkas. 'Don't, you'll be killed!'

ʔahaw. 'Well well!'

ʔiw-tšə nkotək ʔɛs·pən ʔɛ-ki-mk·əwat ns·wɛ ʔɛs·pənən, nkot ʔɛ-ki-nis·wɛmat, minə nkot, ʔahaw tšə ni ns·wɛ ʔɛ-ki-kč·ə-mikatwat. 'One time the Raccoon found three raccoons, he threw down the first one, and another, by golly! with the third one he fought hard.'

Thus it is seen that each type of minimal clause may function as an entire sentence or as a clause within a larger sentence. All the examples but the last are from conversational style; in narrative style a minimal clause suggests parenthetical comment by the narrator. *kɛko* is a particle, but it serves as the general substitution form for negative commands; a prohibition may be made explicit by using *kɛko* followed by the prohibitive mode form of the appropriate verb. The borderline between particles and interjections is difficult to survey. A certain small number of interjections are definitely marked as such by phonetic deviation from the otherwise universal norm. Thus *ʔahaw* contains an *h*, which is not found except in interjections; also, though not marked in the transcription, the vowels of this word are frequently very nasal, and there is a characteristic intonation curve—middle high for the first syllable, stressed and falling from high to low for the second.

In the last example *ʔahaw* functions as a clause, yet it also in a sense serves as an opener for the full clause which follows it, since *tšə*, a slight disjunctive, which cannot appear in first position in the clause, is hung onto it.

Since minimal clauses consist only of a single word their analysis is complete when the types of words which can constitute them are

[4] Most of the syntactical terms used in this paper are those standardized by Bloomfield in his Language. 'Nexus' and 'junction,' however, come from Jespersen, as, for example, in his The Philosophy of Grammar. In working out the syntax of Potawatomi extensive use was made of Jespersen's system of Analytical Syntax; but for final presentation it was felt that the use of an extensive set of auxiliary symbols was unnecessary.

mentioned. On the other hand, full clauses may consist of more than one word and involve syntactical relations which must be dealt with one at a time. The following two clauses are respectively equational and regular:

ʔiw tšə jɛ ʔi wɛč-mpot. 'That is why he is dying.'

ʔɛ-ki-nišok·məwat ʔos·ən. 'He helped his father.'

Full clauses may be made into INTERROGATIVES. Interrogative clauses occur only in conversational style; therefore interrogative regular clauses have the verb in the indicative. The interrogative is formed in regular clauses by placing the particle *nə* after the verb:

wki-nišok·məwa nə ʔos·ən. 'Did he help his father?'

Equational predications are interrogative when the first term of the equation is an interrogative substitution:

ni-tšə-wi jɛ ʔi wɛč-mpot. 'Why is it that he is dying?'

But such a substitution may stand as a complete clause and sentence:

ni-tšə-wi. 'Why?'

It is to be noted that the transcription of questions closes with a period, not with a different symbol. The intonation curve is the same; the interrogative quality is introduced by the words themselves only.

4. SUBJECT, OBJECT, PREDICATOR. A syntactical construction involving a verb in either participial or finite (non-finite) mode is a NEXUS, as is one involving a predicative particle. A syntactical construction not involving a predicator or a participial is a JUNCTION. In the present section are dealt with the principal types of nexus in regular clauses; SUBJECT-VERB and OBJECT-VERB. Subject and object may be referred to together by the indifferent term REFERENCE.

Nouns and nominal substitutions fall into two gender classes, ANIMATE and INANIMATE. Verbs contain within their morphological structure elements indicating the gender of the subject and, if transitive, the object; also the number and person of all references. In addition to first, second, and third persons, there are, for animate references, two subsidiary third personal categories, the OBVIATIVE and SECOND OBVIATIVE; for further discussion of these see §6 and §14.

When a reference made by the morphological elements within a verb is third person or obviative, the area defined by the gender, person, and number categories is still wide. Thus the form *wapman*, standing alone as a clause, says that 'he (an animate third person) sees him (another animate third person)', but not whether the he and the him are people or kettles or trees—all of which objects would fall in the right classifica-

tions. Such an internal reference may therefore be termed IMPLICIT. The reference is made EXPLICIT if a nominal form in the right gender, person, and number is present in the clause. Such a nominal form may be a noun in a flexion (that is, not in a locative or vocative form), a nominal substitution, a participial, a numeral, or a junction of the types dealt with below (§§6–8).

The situation is otherwise if the reference within the verb is to first or second person. In this case the animate gender and the person and number delimitation suffice to make completely precise the entity to which reference is made; it is the speaker, or the person spoken to, or both. A first or second person plural form, it is true, refers to other individuals beside the speaker and hearer, but in no case could these be specified accurately within the clause in question. Therefore a first or second person reference within a verb is explicit. An added substitution (personal pronoun) can only emphasize the reference, and may be said to stand in EXTRAPOSITION with that explicit internal reference (§12):

> kiš·pən pwa-ns·ət niw p·əšk-mʔwɛ, kin kwi-ns·əko. 'If you do not kill the lion, you yourself will be killed.'

An imperative predication has a verb in the imperative or the prohibitive mode. In both of these modes only second person subject forms exist; therefore the subject of such a predication is always explicit; an added word explaining the subject always is in extraposition with the internal subject.

There is a class of intransitive verbs formally like others which take an inanimate subject, distinguished syntactically from the others in that they can take no explicit subject. An example is mnokiškət 'it is a nice day'; the others have comparable 'impersonal' meanings. Because of their formal structure these are probably best interpreted as containing internal subjects, rather than as constituting subjectless predications; but the implicit-explicit contrast obviously has no meaning.

5. PARTICIPIALS. The internal organization of a participial construction is precisely like that of a regular clause. But as a whole it is not a clause, not an independent nexus; it is a nominal form. If the verb in a regular clause is put into the participial mode the entire clause is nominalized. This nominalization may be primarily of subject or of object or, in certain cases, of an idea expressed in a dependent particle which is prefixed to the verb form proper. Thus mačjan 'I, eating,' or 'what I eat;' wɛč-mpot 'why he dies.'

Some participials have become fossilized and function as nouns with no added words in the same construction at all; *pas·kək* 'clothing'; *ʔɛtat* 'his house'—'where he lives.'

Participials are particularly important in equational predications; see §10.

6. POSSESSION. Nouns frequently appear in forms which express by morphological elements the person and number category of a POSSESSOR. This relationship is a type of junction, but in many ways it resembles the nexus relation of subject and verb; a third person possessor is implicit unless made explicit by an added word in the right category; it is explicit if first or second person without the addition of another word, and such an added word stands in extraposition.

The possessor of a possessed noun may itself be a possessed noun, so that forms like the following are quite possible:

> *nos· ʔok·məs·ən tənnimnən* 'my father's grandmother's husband';
> i.e., 'my (first person) father (third person), his (third person) grandmother (obviative), her (indifferent form for third person and obviative) husband (second obviative).'

The possessor of 'husband' is not explicitly obviative because there is no morphological device for distinguishing between a third person and obviative possessor; but the possessive relations are quite clear, since 'husband' is itself second obviative.

7. OTHER JUNCTIONS. There are four other types of junction, excluding those involving numerals which are left for the next section.

The first is an attribute-head group in which the head is noun or participial, the attribute a demonstrative substitution: *ʔotə nənə* 'that man over there'. In this type of junction there is one set of substitutions which function almost as articles, with a meaning that ranges from full demonstrative force down to practically zero: *ʔo nənə* 'this man', or 'the man', or 'a man'.

The second is an attribute-head group in which both parts are nouns. This is not common, appearing mainly in story titles or names of story characters. Thus *mt·ək nənə* 'Log-Man'; *wapkən pwakən* 'Clay-Pipe'; *wapkən pwakən jats·ok·an* 'story of Clay-Pipe'. The last example contains two such junctions; the third word is head for the first two as attribute, and the second for the first.

The third is a similar construction with the attribute placed second and joined with the particle *minə* 'and', 'with'. *ʔo nənə minə wtək·wɛjo-mən ʔɛ-ki-pjat,* 'the man with his wife he came.' The ungrammatical translation brings out the fact that this construction is a matter of

attribution rathern than of conjunction; the added noun *wtǝk·wɛjomǝn* does not alter the person and number category of *nǝnǝ*, the verb being in third person singular form.

Lastly there is a junction in which a noun stands in extraposition with another nominal form; again an ungrammatical English rendering brings out the effect:

> *ʔiw-tšǝ ʔo nǝš·napɛ ʔɛ-ki-pwa-kk·ɛnmat niw tǝʔɛs·pǝnmǝn, mǝ·kwɛ-kas· ʔiw ʔɛ-ki-pk·ǝškannǝk.* 'So the man could not pick out his own coon; the red rag it had fallen off.'

8. JUNCTIONS INVOLVING NUMERALS. There is a series of numeral forms which have cardinal or ordinal meaning according to context. In either case they are nominal forms. One such may be used as head in the first type of attribute-head construction mentioned above; and when so used the demonstrative substitution serves to delimit gender, person, and number; the numeral itself is incapable of varying to specify these categories. Thus *ʔo ns·wɛ* 'the third' (third person singular animate), *niw ns·wɛ* 'the third' or 'the three' (obviative animate, number indeterminate as always in obviative forms), *kiw ns·wɛ* 'the third ones' or 'the three' (third person plural animate).

The same numeral forms may function as attributes, the head being a noun; *ns·wɛ ʔɛs·pǝnǝn* 'three coons' or 'the third coon' (obviative).

There is a group of special numeral forms with such meanings as 'so-many sacksful', 'so-many pieces', and the like. These may be used alone, the substance being understood, or with an attributive noun usually placed after the quantifier. Gender is determined by the attribute, present or understood from context. 'One sackful' is plural, syntactically, if it contains something which is in pieces and there is more than one such piece—berries, ants, etc. Thus *nkotoškǝn minɛn* 'one sackful of berries', syntactically inanimate plural third person.

9. PARTICLE MODIFICATION. The part of speech termed 'particle' includes all elements which are not inflected. Syntactically a few of them function as connectives, and a very small number as predicators (see §10). Most of them, however, are adverbs, of time, place, or manner. Thus *kǝt·ǝ šǝ na mpowak* 'sure enough he's dead', in which the form *kǝt·ǝ šǝ na* is a habitual collocation of particles with the unitary meaning 'sure enough', verifying predication.

Locative forms may be derived from noun stems, and have a similar syntactical function; *ʔipǝ čik-pjɛk ʔɛ-ki-pjat* 'he went over there on the shore', *ʔipǝ čik-top·wǝnǝk ʔɛ-ki-šjat* 'he went over there by the table', contain a particle *ʔipǝ* 'over there', a locative derivative *čik-top·wǝnǝk* 'by

the table' from a stem meaning 'table', and a form *čik-pjɛk* which is like the last except that the stem is not used except in this particular kind of locative derivative—it is suppletive to the word *mpiš·* 'water, body of water'.

But when two locatives are used together, the second may simply be a noun in singular flexion; *ntəšja nam-jəkwan top·wən* 'I go underneath the table' is as acceptable as *ntəšja nam-jəkwan top·wənək.*, the latter having the locative suffix *-k* on the noun, the former without it. In cases like the former the locative particle seems like a preposition.

Nouns in a non-locative form may also function as adverbs with a non-locative meaning:

   mš·kwɛkas· ʔɛ-ki-napk·otnat.   'He tied a red rag around the other's neck.'

   mk·əsən ʔɛ-ki-nis·wɛpnəmwat.   'He threw the shoe down to the other.'

In the first example the verb is transitive taking animate subject and object, and means 'to tie something around the neck of'; the object is internal and implicit; *mš·kwɛkas·* 'red rag', inanimate, though in the English translation it sound like an object, is simply a noun functioning as an adverb of means, specifying what it is with which the neck is tied.   In the second example the verb may be termed a double-object verb; the morphologically marked object, which must be animate, is here implicit, and *mk·əsən* 'shoe', inanimate, though semantically the direct object, is syntactically simply a particle of manner or instrument. In such cases as these the adverb might be termed a PSEUDO-OBJECT.

From numeral forms can be derived adverbs of how many times; e.g. *nkotək* means 'once' in either of the English senses, either 'not twice' or the vague 'at one time'.

Finally, subordinate clauses with verb in dependent mode are adverbs within the clause to which they are subordinated; see §17.

10. EQUATIONAL PREDICATIONS.   The pattern for equational predications is FIRST TERM, PREDICATOR, SECOND TERM.   The first term is any nominal form, though rarely if ever a participial.   The predicator is a particle, which may be omitted; if omitted the clause is elliptical.   The second term is invariably a participial construction:

   ʔiw tšə jɛ ʔo wɛč-k·ɛw-piktəpɛš·ək pwakən nkom top·i.   'That is the reason why a pipe breaks so easily up to this day.'

   ʔiw s·ə nkom nišək ʔɛtnəsjan ʔɛ-mpojɛk.   'This today is the second time I have been around for the death of one of you.'

   waposo s·əwi ʔo ʔɛščəkɛt.   'Rabbit is the one who is doing it.'

The predicators are respectively *jɛ*, *s·ə*, and *s·əwi*. In addition to functioning as predicators these particles may have some semantic value of a particular type, but the precise differences between them are difficult to determine. The first term in the first two examples is *ʔiw*, inanimate singular substitution, in the last *waposo* 'Rabbit' (proper name). The second term in the first example is all that comes after *jɛ*; *ʔi*, inanimate singular demonstrative substitution used articularly, modifies the entire construction which follows it; *pwakən* 'pipe' is subject of the participial, *nkom topəi* 'up to this day' is a particle group, and *wk·ɛw* 'easily', a particle, is inserted within the participial itself. The second example is from conversational style (quotation in a story) and the syntax within the second term is not clear. *ʔɛtnəsjan* is 'I being here'; *nkom* 'today', and *nišək* 'the second time' are particle modifiers; *ʔɛ-mpojɛk* 'you (pl) die' is narrative mode, which seems to play a subordinated rôle in clauses of conversational style, though the precise relation is not clear. In the third example the second term is *ʔo ʔɛščəkɛt* 'the one-who-is-doing-it'.

11. GROUPING OF CLAUSES. All the ways in which words are put together to form clauses have now been discussed. Next it is necessary to treat the linking of clauses as wholes.

The most obvious way to link clauses is to include them within a single sentence (segment between period-intonations); clauses within a single sentence are more closely connected than those divided by period intonations. It is hardly necessary to give examples of this. The placement of comma intonations, apparently, does not change linking in the same way; but see §13.

12. ELLIPTICAL CLAUSES, MINIMAL CLAUSES, AND EXTRAPOSITION. A minimal clause included within a sentence has a close connection with one of the adjacent clauses. A good case is the word *ʔahaw* in the example in §3, which was analyzed in that section. The same comment applies to elliptical clauses, and *minə nkot* in the same example is a case; *minə* is a connective, *nkot* is explicit object of a verb which is not given in this clause, but which can only be the same as the verb in the clause before this one, namely *ʔɛ-ki-nis·wɛpnat*. ('He threw down the first one, and another, ... ')

An element in extraposition may constitute a clause, closely linked to that containing the element with which it is in extraposition. This is true in the case of vocatives in extraposition with imperatives or other finite forms; otherwise there is no distinction between extrapositions that constitute clauses and those that do not; *pjan, nməš·o*. 'Come here, Grandfather'.

13. PIVOTING. An interesting type of linking is found in sentences like the following:

> *ʔiw-tša ʔɛ-nə-mkəknot ʔo ʔɛs·pən ʔɛ-ki-nišok·məwat ʔɛ-kiws·ɛnət.*
> 'So when-he-grew-up the coon he helped him hunt.'

The three clauses are coordinate. In rapid speech (as indicated by the transcription given here) the three are uttered as a single phrase. The form *ʔo ʔɛs·pən* is in the proper flexion to function as subject both of the verb preceding it and the verb following it, and lacking a comma pause before it or after it there is no way whatsoever to tell that it goes with one clause or with the other. In the mind of the speaker it may actually be assigned to one or the other, but it may possible be structured in his mind as the analyst, having no objective clue, must interpret it; namely, as going with both. Such an element, standing between two predicators, having a syntactical relation to each, and not being marked off from either by a comma, may be termed a PIVOT. A pivot binds the two clauses between which it stands more closely than they would be bound without the pivoting. The pivot need not, as it does in the above example, perform the same function in both clauses; witness:

> *ʔɛ-ki-nišok·məwat ʔos·ən ʔɛ-kiws·ɛnət.* 'He helped his father hunt.'

Here the pivot is object of the first verb, subject of the second.

> *ʔɛ-jɛ-pməpt·ot ʔo ʔɛs·pən ʔɛ-ki-wapmat ʔamon ʔɛ-kočnənət.* 'As he
> ran along, Raccoon, he saw a beehive hanging down.'

ʔo ʔɛs·pən is subject of the first and second clauses; *ʔamon* is object of the second, subject of the third.

14. SEQUENCE OF PERSON. Both within the clause and between clauses different entities are kept distinct by referring to them with forms for different personal categories. In the expression *nos· ʔok·məs·ən tənnimnən* 'my father's grandmother's husband', 'my' is first person, 'father' third person, 'grandmother' obviative, and 'husband' second obviative. One cannot quite make the generalization that in a group of connected clauses no two distinct entities can be in the same person; this is the tendency, but the available morphological forms do not permit it to work out completely; nor is it necessary for clarity. Thus:

> *ʔiw-tša ʔo ʔɛs·pən ʔɛ-ktəkosit nək·o mt·əkwɛn, wič-ʔɛs·pənən ʔɛ-
> mk·əwat, ʔɛ-nis·wɛpnəmwat niw nəš·napɛn, nək·o ʔɛ-ns·at ʔo
> nəš·napɛ.* 'So the raccoon would climb a tree, find his fellow
> coons, would throw them down to the man, customarily the man
> would kill them.'

The subject of the first three verbs is the same third person singular animate entity, 'raccoon'. The object of each of the three verbs is in

the obviate, although they refer to different entities; but in each case the object is made explicit with a nominal form that is not a substitution, so that there is no danger of confusion. The last verb has a new third person subject, which is made explicit and so cannot be confused with the third person subject of the previous verbs. The only possible danger of confusion is in the identity of the implicit obviative object of the last verb; it could conceivably be either 'tree' or 'fellow-coon', but obviously in the semantic circumstances (which include, of course, more context than given above), there is no real danger of misinterpretation.

In a form like *ʔɛ-ki-nišok·məwat ʔos·ən ʔɛ-kiws·ɛnət* 'he helped his father hunt', or, without the *ʔos·ən*, 'he-helped-the-other the-other-hunted', the change of person gives the effect of subordinating one clause to the other, at least in the English translation. But in the Potawatomi form the two are coordinate; this close linking of idea is the type of thing produced by the mechanism of person sequence.

Inanimate nominal words have no obviate form, but intransitive verbs with inanimate subjects do, and when such a verb occurs in obviative form the secondary nature of the idea it expresses is emphasized.

 čo-wik·a sakəč ʔɛ-ki-šjat ʔɛ-kməjannək. 'He would never go outside
  when it was raining.'

ʔɛ-kməjannək means 'it (obviative) was raining'; the obviative form gives the subordination which is not here concurrently expressed by any other mechanism.

15. SEQUENCE OF TENSE. In narrative style all the narrative mode forms refer equally to past time. There are three distinguishable tenses, comparable to those in the indicative which have, respectively, past, present, and future meaning. In narrative style, when used in an isolated clause, the meaning of the past and present tenses is practically the same, while the formal future tense implies intention. But when used in adjacent clauses, there is a linking of meaning of the three tenses; the past followed by the present will imply that the first event not only preceded the second in time, but that it was possibly responsible for the occurrence of the second; the future, following past or present, will have the intentional meaning emphasized:

 ʔiw-tšə škəč nɛʔiš ʔɛ-ki-nis·awat, ʔɛ-kč·ə-mikatwat. 'So after while
  both fell to the ground, then fought together strenuously.'
  (past, present)

 *mt·ək ʔɛ-kkəkapwat, čo tšə mamta ʔɛ-wi-wɛp·otwat, ʔɛ-pwa-kk·ɛnmat
  niw təʔɛs·pənmən.* 'He had a stick, but couldn't use it, since he
  couldn't recognize his own coon.' (present, future, present)

In the last example the sequence of tenses is such that the first clause gives the circumstances, the second the unfulfilled desire, the third the reason for frustration.

16. PSEUDO-SUBORDINATION. Certain particles and elements which precede the verb stem in verbal complexes (preverbs or dependent particles) have meanings which semantically subordinate the clauses in which they appear. The subordination is real in the sense that clauses with these elements would not constitute complete utterances, but must have another clause to hang onto; but it is not comparable to that for which the term subordination is being reserved, since there a distinct mode is used, while here so far as the verbal complex itself is concerned the verb of the apparently subordinated clause is entirely comparable to that of the apparently major clause.

ʔi-tšǝ ʔɛ-pjat ʔipǝ ʔankonojǝn ʔɛ-tšǝ-wtankwɛnǝt. 'So he went there where the ants had their village.'

ʔɛ-jɛ-pmǝpt·ot ʔo ʔɛs·pǝn ʔɛ-ki-wapmat ʔamon ʔɛ-koǰnǝnǝt. 'As he ran along, Raccoon, he saw a beehive hanging down.'

In the first example the second clause contains *ʔipǝ* 'there' and the preverb *tšǝ* 'there, where'; the latter gives it the subordinate idea. In the second example *jɛ* in the first verb means 'as, while.'

17. SUBORDINATION. Only one construction will be referred to by this term; a clause with the verb in the dependent mode, with or without the introductory particle *kiš·pǝn*, in either case meaning 'if . . . ' Such a construction is an adverb within the clause to which it is subordinated:

(*kiš·pǝn*) *pwa-pjɛtojǝn, kwi-ns·ǝko.* 'If you don't bring them, you will be killed.'

This mode may also be used, with or without the particle *nakɛna* or *kɛna*, in the meaning 'would that . . . ', as an independent clause.

18. QUOTATION AND PARENTHESIS. In narrative style a form in indicative mode must either be a quotation or a parenthetical, explanatory, comment by the narrator. As an example of the latter may be given:

ki tšǝ ʔjajkɛnwik tšǝ kiw, čo ki-kk·ɛnmas·in niw tǝʔɛs·pǝnmǝn. 'They were just the same size, those ones, you see; he couldn't recognize (which one was) his own coon.'

The added 'you see' brings out the tone of the parenthesis, which is an explanation to the listener of the reason for an incident in the story.

Quotations may contain an indicative or imperative mode verb or, of course, no verb at all, and in the latter case the limits of the quotation may be recognizable only because of the meaning.

ʔi-tšə ʔɛ-p·ič-tpəwɛwat ʔi-šə nkot ʔɛ-k·ətot, 'nkək·ɛntan knəpəč wa-napnənko,' ʔɛ-nat. 'So as they held council one spoke thusly; "I know, perhaps, what we should do", he said.'

In this case and many others, whether or not the quotation contains a verb, the beginning and end are carefully marked by placing a narrative mode form of a verb meaning 'to say' immediately before and after the quotation itself, almost like spoken quotation marks; in this case, *ʔɛ-k·ətot* 'he said' and *ʔɛ-nat* 'he said to him, them'.

A quotation may contain a quotation:

... (*waposo*) *ʔɛ-ki-nat* '*nkəč·-nəč·i. nəš·napɛk k·ətwik* "čo kta-čak-tas·inawa ʔi sispak·wət," *k·ətwik,* "wta-čaktanawa," *nin ntək·ət.*'
... 'Rabbit) said to them "I have a bet on. The Indians said 'you (the ants) won't eat all the sugar' they said; 'they will' I myself say." '

There is no contrast between 'direct' and 'indirect' discourse, but in the first subquotation the situation is so complicated that the narrator lost his personal frame of reference and used a second person form meaning actually 'the ants' to whom the person quoted at the moment is not talking, because they are being spoken to by the speaker of the main quotation.

... *nkot minə ʔɛ-k·ətot, 'š·əpši nki-nək "nin nta-ns·a" k·əto.*'
' ... one then said "Tiger told me 'I'll kill him,' he said." '

Here a subsidiary quotation is marked off by the device mentioned above. The final word must be taken as within the major quotation because it is in indicative mode; had the narrator meant to close the major quotation he would have said *ʔɛ-k·ətot,* in the narrative mode.

The quotation marks used in the Potawatomi citations above are inserted to show the structure clearly; they have no significance whatsoever as phonetic or prosodic markers.

19. WORD ORDER. A survey of the examples given above will give the reader a fairly good idea of typical word order. Certain general principles can be adduced:

(1) There are certain elements which have a relatively fixed position. They need not be all enumerated here, but, for example: the interrogative particle *nə* always immediately follows a verb; *kɛko* 'don't' is either used alone or immediately before a prohibitive verb form; *tšə*, mild disjunctive, stands second in the clause, never first. The elements in most types of junction have a fixed order; *ʔo nəš·napɛ* and *nəš·napɛ ʔo* mean two different things, 'the Indian', and 'an Indian, he ... ' The

elements in equational predications do not vary from the order first term—predicator—second term.

(2) Elements the syntactical connections of which are morphologically marked vary most in position; subject, verb, and object (not pseudo-object) can occur in almost any order relative to each other, or with particles and other words separating them.

(3) There is a principle of EMPHASIS. So far as other rules will permit, elements to be emphasized are placed first. For example, the extraposed *ms·kwɛkas·* in *ms·kwɛkas· ʔiw ʔɛ-ki-pk·əškannək* 'the red rag it had fallen off' is emphasized by its position.

(4) Finally, there is a principle of ADJACENCE. Except for forms controlled by other rules, two elements which go together are put next to each other, though this rule does not in itself determine which shall fall first, and, if no other principle does, there will be variation.

MISCELLANEA

THE ETYMOLOGY OF ENGLISH *big*

No convincing or satisfactory etymology has as yet been suggested for the English word *big*. Skeat[1] properly compares it with the Norwegian *bugge* 'strong man' and says that it is probably a borrowing from Scandinavian. He further hazards a connection with NE *bow*, Goth. *biugan*, from PG **beugan*, and there lets the matter rest. Webster's New International Dictionary connects it with *bug* and *Puck*, originally 'hobgoblin, spectre', and suggests a further relation with Lat. *boccae* 'puffed cheeks'. But phonetic difficulties, to say the least, are at once apparent. The word *bug* is undoubtedly borrowed from the grotesque fancies of Celtic folklore; cf. Welsh *bwg* 'hobgoblin': Lith. *búgti*, *baugùs* 'terrify(ing)', Skt. *bhujati* 'turn aside', Gk. φεύγω, Lat. *fugio* 'flee', all from IE **bheug-*. If *big* is from the Norse it must have a Germanic inheritance and could not be related to the IE root **bheug-* at all. *Puck*, < ME *pouke* < OE *pūca* : ON *pūki*, is equally bad, if not worse. Nor is the semantic connection all that could be desired. Middle English (*big* has no Anglo-Saxon antecedent) *big*, *bigge*, *bygly* mean 'large, rich, mightily', and the Scandinavian *bugge* means, as we have seen above, 'a strong or important man'. It is a far cry from 'imp, hobgoblin' to the conception of largeness, might, and wealth. Der Tag of proletarian ideologies had not yet arrived.

We must go back to Old Norse to clear up the etymology of *big*. ON *byggja*, *byggva* mean 'dwell in a place, settle, inhabit' and we have the participle *byggjandi* 'inhabitant'. For the Norwegian *bugge* we can posit an ON **bygge* 'one settled or established', hence 'one who is mighty or important, rich'. This word must have been borrowed in late Old English or early Middle English. In fact we have the verb *big(g)e* 'settle, found' in Gawayn 20. The IE root is of course **bheu-* 'be, exist, dwell' seen in OE *bēon*, *būan*, Goth. *bauan*, Gk. φύσις, Skt. *bhavana* 'dwelling', *bhavant* 'lordly', *bhos*, *bhavatī* 'sir, lady'. The latter words approach the Old Norse in meaning through the more direct semantic link of 'being'.

[1] Concise Etymological Dictionary

It is also necessary to connect the Greek φώς, φωτός 'man of high rank; human being, mortal' with this root. It has heretofore,[2] through some tortuous semantic labyrinth, been connected with φά(ϝ)ος, Att. Contr. φῶς 'light' : Skt. *bhāti* 'shines'. The Greek φώς 'man' is from a *φϝως < IE *bheu-*, written more fully as *bhéwx-* (> *bheu-*), with the accent on the first syllable, and *bhwéx-* (> *bhwā-*, *bhwō-*), with the accent on the second; φώς is, of course, from the latter. The presence of the laryngeal *x* in this root agrees with H. L. Smith Jr.'s contention[3] that the verschärfung of medial *-w-* to *-ggw-* when the accent immediately followed (cf. *byggva* above) was due to a laryngeal.

WILLIAM M. AUSTIN

[2] Cf. Boisacq: Dictionaire Étymologique.
[3] Demonstrated in his doctoral dissertation, Princeton 1938.

BOOK REVIEWS

Kleine Beiträge zur churritischen Grammatik. Pp. IV + 67.
By JOHANNES FRIEDRICH. (Mitteilungen der Vorderasiatisch-Aegyptischen Gesellschaft 42. Band, 2. Heft). Leipzig: J. C. Hinrichs Verlag, 1939.

The interest in the Ḫurrian problem[1] has steadily increased during recent years. For its solution further clarification of the Ḫurrian language is essential. Not long ago the letter of Tušratta, king of Mitanni, to Amenophis III of Egypt, among the famous Amarna letters,[2] was the only Ḫurrian document that had come down to us. Recently, however, new material from Boğazköy[3] and from Ras Shamra[4] has been added and unpublished Ḫurrian tablets from Mari[5] are known to be extant. The Nuzu tablets must also be mentioned here; they contain Ḫurrian proper names in large numbers[6] and furthermore numerous un-Akkadian, presumably Ḫurrian, words and phrases.[7] Ḫurrian names in almost all tablets found in Upper Mesopotamia, Syria and Palestine[8]

[1] For a general orientation see Speiser, Ethnic Movements in the Near East in the Second Millennium B.C. (Publ. of the American Schools of Oriental Research, Offprint Series, No. 1); Götze, Hethiter, Churriter und Assyrer; Ungnad, Subartu.

[2] The most reliable edition (in transliteration) is that of Friedrich, contained in his Kleinasiatische Sprachdenkmäler (8 ff.).

[3] The bulk of it is published in Keilschrifturkunden aus Boghazköi (KUB) XXVII (by C.-G. von Brandenstein); the best preserved text is, however, KUB XXIX 8 (the Ḫurrian part starting with line II 29). A number of less important fragments is scattered through the other volumes of Bogazköy texts.

[4] Syria 10 pl. 64 No. 4 (most recently discussed by C.-G. von Brandenstein, Zeitschrift der Deutschen Morgenländischen Ges. 91.555 ff.); pl. 67 No. 7; pl. 73 Nos. 27 and 28; pl. 74/75 Nos. 34, 45. Ras Shamra vocabulary No. 8 pls. 50 to 52 (with extensive discussions by Thureau-Dangin on p. 234 ff.); the text can also be found in Friedrich's Kleinasiatische Sprachdenkmäler (149 ff.). Syria 12.389 f. (c . Hrozný, Arch. Or. 4 118 ff.). See furthermore Syria 19.197.

[5] Comptes Rendus de l'Académie des Inscriptions, Sept. 23d 1938.

[6] A comprehensive list is being prepared by the Chicago Oriental Institute.

[7] See Gordon, Orientalia 7.52 ff., and previously Bull. of the American Schools of Or. Res. 64.23 ff.

[8] Chagar Bazar: Gadd, Iraq 4.178 ff. Atchana: Nature 1938.1131; S. Smith, Antiquaries Journal 19.38 ff. Mishrife (Qatna): Virolleaud, Syria 8.293 f.; 9.90 ff.; 11.311 ff. Taanach: Hrozný, Denkschriften der Wiener Akad., philos.-hist. Klasse 50.4 and 52.3; Gustavs, Die Personennamen in den Tontafeln von Tell Taannek. Shechem: Böhl, Zeitschr. des Deutschen Palästina Vereins 49.321 ff.

(as far as they date from the 2nd millennium) testify to the great influence that the Ḫurrians must once have exercised.

Friedrich's presentation is primarily based on the Tušratta letter; the author continues with marked success the work previously done by others.[9] It is his aim, however, to trace the grammatical facts with which he is dealing through the complete material and, by emphasizing the common features, to establish the unity of the Ḫurrian dialects.

The author starts from the known facts, but invariably proceeds to the clarification of hitherto unknown details, and thus contributes materially to a future Ḫurrian grammar.

Chapter 1 deals with the plural of the noun which, it has long since been recognized, is characterized by the suffix -na.[10] New is the demonstration that in certain cases the final vowel of the stem is eliminated, with subsequent assimilation of the -n of the suffix to the last consonant of the stem (eni- 'god' : enna- 'gods'; umini- 'country' : uminna- 'countries'; uli- 'another' : ulla- 'other'; Ḫutellurra- 'a group of deities'). The plural suffix is omitted under certain circumstances which remain to be defined. It should be noted that in such cases the plural nature of the noun is anticipated by suffixes preferably attached to the first word of the sentence.

Chapter 2 discusses the forms which the subject and the object of the transitive verb assume; they end in -š and -n respectively. The -š is indispensable,[11] the -n however seems frequently to be missing. Here again one should ask to what extent the -n is anticipated as a suffix attached to preceding words of the same sentence. The fact must be emphasized that the suffix is invariably present only in those relatively rare cases where the object begins the sentence. Special attention should be called to Friedrich's demonstration that in the plural -našuš corresponds to the -š of the singular.[12]

Chapter 3 is devoted to the sentence connectives. According to Friedrich they are represented by enclitic -an and -man. The author

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[9] After preliminary studies by Jensen (Zeitschrift für Assyriologie 5.166 ff.; 6.34 ff.; 14.173 ff.) and Brünnow (ibid. 5.209 ff.), L. Messerschmidt (Mitt. der Vorderasiatischen Gesellschaft 1899,4) and F. Bork (ibid. 1909 1/2) furnished the most significant contributions.

[10] This -na constitutes the stem of the plural; cf. fn. 12.

[11] It is missing (omitted or assimilated?) in front of the pronominal suffixes -tta and -lla (see Friedrich 23 and 27).

[12] Cf. previously Jensen, Zeitschrift für Assyr. 14.175. Whoever distinguishes between aštiš and aštin as two nominal cases should for the sake of consistency posit a similar pair in the plural (ennašuš and *ennan, cf. tiwenan II 65).

expresses the opinion that -*an* is replaced by -*man* after the vowels *e*, *i*, and *u*; at the same time he ascribes to -*man* the further meaning 'but'. I can here only voice my doubts on this point and state that in my opinion -*n* merely anticipates the *n*-case of a following noun.[13] This leaves -*ma* as sentence connective; another element of this kind is -*ni*. Either element may appear alone, but they also appear combined.[14]

Chapter 4 elaborates on Bork's important discovery[15] that the elements -*tta*, -*ma/me*, -*lla/lle* represent enclitic pronouns (1st singular, 3rd singular, and 3rd plural respectively). Friedrich adds -*tilla*, probably 'us'. As far as -*ma/me* is concerned, I should like to point out the possibility that it is a variant of -*na*, probably due to dissimilation. I cannot help finding in forms like *ḫa-šu-u-ša-ú-ú-un* (IV 9) and *ú-ú-ri-iw-wu-un-na-a-an* (IV 56) a pronominal -*n* 'him'; I furthermore think it can be shown that not only *ma-an-na-al-la-an* and *šu-ú-al-la-ma-an* but also *ma-an-ni-im-ma-an* and *šu-an-na-ma-an* occur in corresponding places of parallel sentences. Hence, it is likely that the *m* in *ma-an-ni-im-ma-an* (and in *i-nu(-ú)-me-e-ni-i-in*) is caused by the specific conditions which prevail in these forms.

In chapter 5 the numerals are treated. The author's results are critical[16] rather than constructive. It may be added that possibly also the female proper name *Ni-ši-ir-pt* (N 438 5, 11, 12, 16) contains a numeral; the chances are in favor of 'nine'.[17]

Chapter 6 contrasts positive verbal forms with their negative correspondences.[18] The attempt at establishing the form in -*iama* as the negative counterpart of that in -*eta* seems not sufficiently founded and does not convince.[19] Once the existence of a particle -*ma* is recognized,

[13] The suffix, then, can easily be separated from its noun; it appears immediately after its noun only in those cases where the noun begins the sentence.

[14] The sentence connectives are thus 'infixed' in the *n*-case of nouns; see e.g. *ti-we-e-ma-a-an* IV 1 and *ti-we-e-ni-en* IV 33.

[15] Archiv für Orientforschung 8.310. Cf. previously Brünnow, Zeitschrift für Assyr. 5.218.

[16] He rightly censures Bork's paper in OLZ 1932.89 ff. and with equal right rejects Oppenheim's postulation of a numeral *ukka* 'one' on the basis of a misunderstood Nuzu tablet.

[17] Ungnad, Beiträge zur Assyr. VI 118 fn. 1; Landsberger, Der Kultische Kalender 101, 127. A study of H. A. Potratz, Das Pferd in der Frühzeit (1938), directs my attention to the word *ni-šu-wa-an! -ni-wa* in KBo III 2 rev. 45. The author interprets it plausibly as a derivative of the Ḫurrian numeral 'nine', a welcome confirmation of the opinion advanced above.

[18] 3rd sing. pret. negative: *gi-lu-u-šu-a* (I 89), *ni-i-nu-šu-ú-a* (IV 7).

[19] The real difficulty of the adduced passages comes from the *ai*(-*ma-ni*)- which seems to contain a pronoun.

there is no difficulty in analysing *pa-aš-ši-a-a-ma* and *gu-li-a-a-ma* as **paššia* and **gulia* plus this particle.[20]

Chapter 6 discusses the passive orientation of the Ḫurrian verb which has been assumed by Speiser[21] and Oppenheim[22] on the basis of the faulty Akkadian of the Nuzians. Friedrich accepts this argument, although he has not yet found evidence of this important linguistic peculiarity in actual Ḫurrian documents. I think such evidence exists; the significance of the phenomenon necessitates a more detailed investigation which will be presented elsewhere.

The two final chapters are slightly different in scope. They emphasize the comparative unity of all Ḫurrian dialects[23] by summarizing the details which were discussed in the earlier chapters of the book. They furthermore repeat the evidence which is in favor of the thesis that Urarṭean is a younger Ḫurrian dialect.

Friedrich's small book, which so aptly combines the presentation of previously known facts with the demonstration of significant new details, will no doubt have a stimulating effect upon Ḫurrian studies.

ALBRECHT GOETZE

Histoire de la langue française des origines à 1900. Tome X: La langue classique dans la tourmente. Première partie: Contact avec la langue populaire et la langue rurale. Pp. viii + 580. By FERDINAND BRUNOT. Paris: Librairie Armand Colin, 1939.

This sixteenth volume of Ferdinand Brunot's history of the French language deals with the Revolutionary period. More especially, it studies the vicissitudes of the classical language during what Brunot himself calls the 'storm'. There are, however—Brunot *dicente*—no new contributions or deformations directly traceable to the political movement itself. The Revolution merely extended the use of vulgarisms of already long standing, but until then held in check by the influence of the educated classes. In many respects we have a situation similar to that obtaining when Vulgar Latin asserted itself against the classical

[20] Cf. *gu-li-a-a[-ma-a]-an* II 105 where Friedrich had to assume *gulia + man*. In both cases quoted in the text the double *a* seems to indicate that suffixation took place (Friedrich, 18 fn. 3). The negative infix causes such doubling only occasionally, by no means consistently.

[21] Annual of the American Schools of Or. Res. 16.135 ff.

[22] Archiv für Orientforschung 11.56 ff.

[23] I agree with Friedrich in rejecting Bork's opinions. For the 'glosses' *ka₄-ti-ḫi* and *ka₄-ti-ḫu-li-eš* in a letter from Qatna cf. a forthcoming paper of mine in Revue Hittite et Asianique.

idiom. One is likewise reminded of the rapidity with which English evolved when, unrecked of by the ruling classes, it had lost its norm.[1] The phenomenon is not so much of linguistic as of social order—should such a distinction have any weight with a member of the French school.

Brunot is not averse to the view upheld by Frei,[2] that grammatical errors constitute a system corresponding to fundamental drifts in the language which, in many cases, in the presence of inexpugnable syntactic formations, have failed to impose themselves. When the French began to say *je mange du pain*, replacing *mangier pain*, which itself had practically evicted its one-time competitor *de pain mangier*, the type *je ne mange pas de pain* should have pari passu changed *de* to *du*. Likewise should one have said *je mange du bon pain*. The latter is quite acceptable in Modern French, in spite of the purists; the former still constitutes a 'faute'. If the Revolution had been linguistically successful, it should have vindicated both. As far as language is concerned, the Revolution, largely speaking, gave the 'grammaire des fautes' a chance; language, as we shall see later, was not so easily stormed as the Bastille.

The method adopted by Brunot is purely and generally descriptive. Perusing the book, one cannot escape a feeling of being taken on a sort of fairly hurried museum tour through the galleries dealing with the linguistic oddities of the Revolutionary period. Most of the mannerisms listed by Brunot, he observes it himself, do not belong exclusively to the period studied. The period is only quantitatively significant with regard to the features studied. Brunot, of course, could not provide us with anything like even an attempt at statistical treatment.[3] He merely describes phenomena and they are sometimes very impressive in their accumulation. However, in two appendices, I. Spécimens de français écorché, and II. La langue dans la région rémoise en 1789 étudiée dans les cahiers de doléances du baillage de Reims, we have a more searching study, bearing upon a limited area, of various features discussed in earlier chapters. The sharper focus is pleasantly felt.

Certain general observations arise from a consideration of Brunot's findings. First it can be observed that the classical language, throughout the Revolution, successfully resisted the onslaught of vulgarisms.

[1] Cf. Meillet, A., Caractères généraux des langues germaniques[5] 22.

[2] Cf. Frei, H., La Grammaire des fautes, Paris, 1929.

[3] Not that I should be taken as advocating syntax counts, the questionability of which, unless used toward the solution of a specific problem, has been sufficiently pointed out by Spitzer, LANGUAGE 14. 224.

The members of the Constituante were all Condillacians; they wanted the language to remain dignified and pure. Even during the unbridled days of the Convention, representatives of the people could be heard (9) denouncing 'une loi qui consacre des expressions qui ne sont pas dans le dictionnaire'. They wanted to speak well—sometimes too well. How far does that explain the value that later developed for speaking 'not well', or, in a land where a spade was traditionally unmentionable, the sudden mania for talking about nothing but spades, especially dirty ones? One may wonder whether, in the same way that extreme modernism in the arts never flourishes so well as in or against, a thoroughly academicized milieu, the orgy of vulgarism characteristic of the Revolution was not conditioned by the overweening and sometimes, considering the circumstances, comical value for correctness, which continued latently to obtain. Attempts at elevated diction resulted in nothing but bombast, but the vulgar language itself remained curiously artificial. It is strongly reminiscent of the stereotyped jargon characteristic of eighteenth century chansons, known as 'poissard', apparently as literary a product as Berni's burlesque poetry.

That the classical language weathered the storm was due largely to the eminent position Paris obtained in the matter of good usage. This was confirmed by the Revolution itself. For the first time in French history representatives of a France which did not even exist in its unity when the States-General had convened last, were able to meet and hear each other speak. For a good many of them the experience must have been of a kind with that of Soviet delegates, speaking different languages and realizing nevertheless that Russian was the language of the nation they formed. The conscripted army, too, at that moment, proved its usefulness as a means of enforcing linguistic uniformity in France.

Passing to points of detail, one is constrained to observe that Brunot distributes the phenomena he discusses under the classes or captions advocated by him in his La pensée et la langue, the felicitousness of which, at times, leaves one in doubt. In a repertory-like study of this kind one would prefer a more systematically morphological approach. In many cases, again, Brunot is satisfied to raise the question: Archaism or provincialism?, without coming to a decision. But in a work of such a scope, it seems unfair to ask for more than an apt labelling of striking features. Analyses of the type exemplified in the following may strike us as, perhaps, frequent: *Les malades ... qui ont été guérie* [sic in the original] *en un mois sans douleur ni endommagé la peau.* Then Brunot (327): '*Douleur* a pour sujet *le patient* et *endommagé*, *l'opérateur.*' This

may not unfairly be criticized as gratuitous.   Again in the cacographical *quoi quel ne fut point mangez*, Brunot is of the opinion (257) that *fut* without circumflex accent is a past definite, which leads him to infer a syntactic misapprehension.   But *fut* itself would be as unusual a form as *fût*; one may think that the writer for whom both *soit* and *fût* may have been equally 'high language', was the victim of a tendency to over-correction; this, of course, does not preclude the possibility of *fut* adding to the confusion.   Such a construction as *Nous sommes sortis un ba-taillon de la ville* is discussed (331) under the caption 'On se fonde sur la quantité contenue dans un nominal personnel.'   Have we not simply an extension of predicative use?   The distinction made by Brunot be-tween *qui* and the hybrid *quil*, in the cases discussed in the second paragraph under 20, (392, 393) leaves one unconvinced.

From occasional remarks, one gathers that his conception of 'un fait phonétique' suffers from limitations traceable to the lingering influence of the Neo-Grammarians' interpretation of sound-law.   On the other hand, his appeal (336) to an 'instinct naturel et héréditaire de la langue' is either naïve or a simple inadvertence.   It is easier to follow Brunot in his assumption of German influence on French syntax in the use of *si* with the conditional (378).   His discussion of *que* (400), as a 'ligature universelle' or conjunction of general purpose, is meaty and makes good points.

Although in many places one misses the subtler approach of the 'stylisticians' of to-day, and although, again, if only to dispose of criti-cisms, one remains sensitive that under a new-fangled classification, the point of view of the author remains conservative, if not unlively, one cannot but admire the industry and energy that have resulted in the marshalling of such an enormous array of facts.   Brunot was particu-larly careful of getting at the original texts and the results are re-freshing.   We have here an ample historical survey of the French lan-guage during the Revolution, a period which, in spite of its nearness to us, had not been the object of comprehensive treatment until Brunot's pioneer effort.[4]

<div align="right">Paul-Louis Faye</div>

From Latin to Portuguese: historical phonology and morphology of the Portuguese language. Pp. xii + 315. By Edwin B. Williams. Philadelphia: University of Pennsylvania Press, 1938.

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[4] M. Frey's study, Les Transformations du vocabulaire français à l'époque de la Révolution (1789–1800), Paris, 1925, does not have, by any means, the same scope as Brunot's.

The Preface to this work by the Dean of the Graduate School of Arts and Sciences of the University of Pennsylvania begins with these words, which are a summary of much of what had been done previously in the field of Portuguese historical grammar and a statement of the author's purpose: 'Since the publication of Cornu's treatment of Portuguese phonology and morphology in Gröber's Grundriss (2d ed., 1904–1906), much new material has become available through editions of medieval manuscripts, dialect studies, and investigations of individual problems. But no new synthesis of this material has been presented. Nunes and Huber have worked in this direction, but while they have brought together the results of much research, they have left unsolved many of the major problems. The present book is an effort to present in systematic form the phonological and morphological history of the Portuguese language in the light of the most recent scholarship in the field.'

The names mentioned by Professor Williams are those of scholars who have published documents expressly framed as comprehensive accounts of the phonological and morphological phenomena of Portuguese, beginning with Cornu's useful but sometimes incorrect treatise in Gröber's Grundriss der romanischen Philologie and including the all too elementary grammar of Nunes, and that of Huber which has made a lasting place for itself among the manuals dealing with aspects of Romance linguistics. Of course Professor Williams is perfectly familiar with the various studies made by the dean of Portuguese linguistic scholars, Leite de Vasconcellos, by the greatly talented Carolina Michaelis de Vasconcellos, by Coelho, by Nobiling, by Lang, by Dunn, and by a host of others. Perusal of the text of the present book and of the List of Books and Articles Cited (241 ff.) will make it clear that he has utilized their reaction to Portuguese linguistic problems and that he has made a strenuous effort to codify every worth-while book or article bearing upon any part of his subject.

A conscientious survey of Professor Williams's new contribution, containing in digested and corrected form his earlier articles and much new material of his contrivance, prompts our judgment that this is a thoroughly good book, which may safely be recommended both to the erudite and to those who are still neophytes. By the latter much of the detail may be omitted in a first examination of the material; all of the assembled data should command the attention of the former.

Professor Williams does not regard all the views expressed by him as conclusive of the issues concerned. On the contrary he invites 'other searchers to further speculation and collection of additional data' leading to definitive solutions. This is wise procedure because, beyond a doubt,

there are details of the history of the Portuguese language set forth here which remain moot matters. Professor Williams is to be praised for his endeavor to explain them; he will welcome dissent from his explanation.

Disclaiming the idea of a full running commentary in this review, which recognizes the high value of Professor Williams's grammar, we venture remarks regarding just a few items. These remarks are typical of criticisms which we might carry through the book; in most instances they relate to minor matters easily corrected, if correction be needed. Let us say immediately that the good List of Books and Articles Cited would gain somewhat if it were arranged entirely in alphabetical order according to the names of the writers of the books and articles. Either this arrangement or one based on the nature of the contributions of the various writers would be preferable to that adopted by Professor Williams, who has arranged them alphabetically by the abbreviations which he has employed.

In the Introduction dealing with Vulgar Latin, Professor Williams follows Professor Grandgent unduly in retaining certain inadequate terms of Latin grammar. Thus, on page 1, he uses 'mute' for 'stop', when treating of V. L. accentuation of penult vowels followed by a consonant plus *l* or *r*. The term 'mute' has no place in a scientific document. Nor has 'surd', which appears here later for 'voiceless stop'. On page 3 this is said: 'The development of Classical Latin vowels into Vulgar Latin vowels is shown in this table.' But did C. L. develop into V. L.? Was not C. L. derived in the third century B. C. out of the stream of V. L. which reaches far back into prehistoric times? V. L. was ancient and ever continuing Latin as spoken by the untutored masses of the Italic folk. The grammarians of the third century B. C. and later fashioned C. L. out of it, modelling no few details upon Greek grammar. But V. L. continued its placid course of development and eventually became the Romance languages; fortunately the agreement between V. L. and C. L. remained very great.

Page 7: it should be said that *manus*, a feminine singular of the fourth declension, did not join the first declension and did not become a masculine noun. A very contestable statement is the following on page 11: 'Probably the most important cause of differentiation [in V. L.] was the intensified stress accent, superimposed, as it were, upon the Vulgar Latin of Italy, Gaul and the Iberian peninsula in varying degrees by the invading Germanic races.' There is no proof of such a Germanic influence and no such influence was ever needed; the expiratory accent of Latin was sufficiently strong for all the purposes of change due to

accentuation. There are other unfounded remarks regarding Germanic influence on pages 11 and 12. On page 12 Professor Williams attributes the failure to diphthongize of stressed open *e* and *o* to 'a weaker stress accent' in Portuguese. But Provençal did not spontaneously diphthongize stressed open *e* and *o*, and Rumanian did not spontaneously break stressed open *o*. There is no evidence that the V. L. accent was feebler in Portugal than elsewhere; it is strong enough today. The exaltation of Santillana on page 15 is surprising. Were his forerunners Berceo, Ruiz, López de Ayala, etc., without influence? On page 45, in §43, line 1, C. L. *ĭ* is printed by mistake for *ŭ*. On page 46, §45, line 2, 'Ptg. *a*' should be 'Ptg. *ɒ*,' i.e., the close *a* or mid-mixed 'neutral' sound. Page 48, §46.6, line 3, 'Ptg. *i*' is not accurate for the semivowel in the case. There are other instances here of *i* for the semivowel. In §46.8 the author has misconceived the process in *grei* from *grĕgem*; here the *g* was lost absolutely and the Ptg. semivowel indicated by *i* came from the *e* of the last syllable in post-hiatus to the stressed *e*. Page 50, §48.6: Ptg. *e* is hardly developed from Latin *o* in the examples given; *toste* and *come* may show the influence of Latin adverbial *-e*; *livre* and *contente* may be abstracts from *livrar* and *contentar*; etc.

Enough has been said here by way of illustration of suggestions for the improvement of an already commendable document. Use of it in the classroom will doubtless provoke other suggestions worthy of being entertained by Professor Williams.

<div style="text-align: right">J. D. M. FORD</div>

The Beginning of Wisdom, an Astrological Treatise by Abraham Ibn Ezra. Edited by RAPHAEL LEVY and FRANCISCO CANTERA. Pp. lxxvi + 235. The Johns Hopkins Studies in Romance Literatures and Languages, Extra Volume 14. Baltimore: The Johns Hopkins Press, 1939.

In this volume Professor Levy continues his studies of the Old French versions of Hebrew medieval texts, inaugurated with the publication of The Astrological Works of Abraham Ibn Ezra, Baltimore, 1927, and followed by that of Recherches lexicographiques sur d'anciens textes français d'origine juive, Baltimore, 1932. The present volume contains an Introduction dealing with the astrological works of Abraham Ibn Ezra (flor. saec. xii), an edition of a hitherto unpublished Old French version of Ibn Ezra's longest astrological work, The Beginning of Wisdom (Reshit Ḥokmah), made by the Jew Hagin in 1273, a glossary of the Old French text, and an English version of the Hebrew original—

these sections being the work of Levy—and, finally, an edition of the hitherto unpublished Hebrew original, for which Cantera is responsible.

As the reviewer has no special competence in Romanic linguistics, he will not deal with the earlier sections of Levy's portion of the volume except to remark that the Glossary would have been more useful if etymological notes had been added to the words listed as borrowings (chiefly from Arabic). The Romanic scholar will be particularly interested in Levy's statement (15) that Hagin's version 'contributes approximately one hundred Judaeo-French words unknown in normal Old French texts, and numerous technical terms for which no example is recorded earlier in the French language.'

On examining Levy's rendering of the Hebrew original, which the author states (21) is 'as faithful and literal as is consistent with established usage', the reviewer was surprised, in view of the good impression which the Introduction and edition of the Old French text had made upon him, to find that it swarms with inaccuracies and loose translations, and therefore does not justify the author's claim. As a test passage the reviewer chose the beginning of Chapter II (English translation 156–7, corresponding to Hebrew text viii–ix), and in the course of only two pages found over twenty errors or poor renderings, of which a number are here cited:

page and line	Levy's translation	Literal translation of the Hebrew text
156.6	right	southern
156.12	it announces	it indicates
156.12	absolutely the nature of heat	the nature of tempered heat
156.16	its end is hot with whirlwinds	its end is heat with pestilence
156.25	land of ... Ardekan	land of ... 'rdyyn
156.27	dens of robbers	in this (sign) are robbers
156.35	torch	lamp or candle
156.35	Kanka	*Knbkh*
157.2	uterus	vulva
157.22	unusual body	tempered body
157.25	speech	behavior
157.28	male stars	evil stars
157.31	elbow of his left hand	elbow of his left arm
157.34	he will not control his ire	he will not control his pride of mind
157.39	the sickness which causes one to fall suddenly and unconsciously	the sickness which falls upon one suddenly and without one's perceiving

The reviewer is at a loss to account for such an astonishing number of shortcomings in so short a passage, except on the theory that Professor Levy's knowledge of Old French far exceeds his knowledge of Hebrew. It is wholly regrettable that the first English translation of this interesting and historically valuable treatise of Ibn Ezra should prove to be so defective.

RALPH MARCUS

Reichstürkische Lautstudien. Pp. 104. By BJÖRN COLLINDER. Uppsala Universitets Årsskrift 1939: 1. (Recueil de Travaux publié par l'Université d'Uppsala). Uppsala: A.-B. Lundequistska Bokhandeln; Leipzig: Otto Harrassowitz, 1939.

This elaborate study falls into two parts: 'Lautwechsel' (18 pages) and 'Akzent' (68 pages). An appendix of $2\frac{1}{2}$ pages, written by H. S. Nyberg, deals with accent in modern Persian. Since the accent so far has been somewhat neglected in grammars of modern Persian this appendix, which is not mentioned on the title page, should not be overlooked.

Collinder's work is based on the speech of an educated young native of Brussa who speaks no other language besides his mother tongue. Anybody who is familiar with the dialect of Istanbul and, like the reviewer, has only a more or less vague recollection of the Brussa variety of Turkish will find it difficult to verify or to contradict the author's observations where he disagrees with others.

The presentation of the e- and a-sounds in the first part of the book is more accurate and scholarly than anything one has found in previous discussions of Turkish pronunciation. The 'i-Umlaut', which has never before been mentioned by any scholar, calls for further investigation on a historical basis. In most of the examples given on page 13 I have heard the closed e (written ë by Collinder) in Istanbul, e.g. dëmir, gëmi, këçi, but in others like deniz, beri, kedi I remember various pronunciations of e. (A German parallel: The pronunciation of e in words like leben, geben varies, even among small groups in the same community.) Much space is given to the discussion of the a-sounds. While Collinder's observations seem more reliable than those of his predecessors, his statements are too definite, especially as he overlooks the fact that in unaccented syllables the a in ordinary rapid speech has a tendency to become a shwa. Some of the pronunciations on pages 21, 22 seem questionable, even if, like the author, one discards Redhouse's pronun-

ciations as unreliable.[1]   The presentation of the consonants is too short though some observations are new and interesting.

Space does not permit to discuss the many details of the most valuable part of the book, the 'Akzent'.   The state of research in this field is very unsatisfactory.   Schlottmann[2] was the first scholar who analyzed Turkish accent, without, however, being conscious of the difference between dynamic and musical accent.   Only Kúnos, Nielsen, Vincze, and Raquette[3] distinguish musical and dynamic (exspiratorisch) accent in Turkish.   Horten[4] denies development of the latter because, due to the character of the language, every single part of a word form is important and does not allow a weakening of syllables.   'Der Akzent muss also ein musikalischer sein.'   According to Nemeth[5] the word accent is 'exspiratorisch, wie im Deutschen'.   Hagopian[6] finds it 'difficult and wearisome to give absolute rules and their exceptions in regard to the accent in Ottoman Turkish, as it varies much.'   He does not separate perceptions of intensity from perceptions of musical accent either.   One of Hagopian's rules is absolutely unintelligible: 'The letters h, r, when they are in the middle and at the end of words, are accented.'   Weil[7] at least gives practical advice for beginners on word

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[1] Sir James Redhouse, A Turkish and English Lexicon.   New impression. Constantinople 1921.   (Apparently Collinder has not used Diran Kélékian, Dictionnaire Turc-Français.   Constantinople 1911.)

[2] Const. Schlottmann, Ueber die Bedeutungen der türkischen Verbalformen (Zeitschrift der Deutschen Morgenländischen Gesellschaft 11 [1857]).

[3] Kúnos Ignácz, Oszmán-török nyelvkönyv (Janua linguae ottomanicae). Budapest 1905.
Kúnos Ignácz, A török nyelv idegen elemei. 1–5: Nyelvtudományi Közlemények 26–28; Budapest 1896–8.
Konrad Nielsen, Akcentueringen i tyrkisk (osmansk).   Christiania, Videnskabs-Selskabet, Forhandlinger, Aar 1906, Nr 9, 1907.
Friedrich Vincze, Beiträge zur Kenntnis des Anatolischen Türkisch: Keleti Szemle—Revue Orientale.   Budapest 9.   (1908).
G. Raquette, The Accent Problem in Turkish. Lund 1927.   Lunds Universitets Årsskrift, N. F. Avd. 1. Vol. 24. Nr 4.

[4] M. Horten, Kleine Türkische Sprachlehre.   Heidelberg 1916.   Especially 10. (Apparently by oversight Collinder has omitted this book in his bibliography.)

[5] J. Németh, Türkische Grammatik.   Durchgesehener Neudruck 23; Berlin and Leipzig 1917.   Sammlung Göschen 771.   (For other books by Németh see Collinder's bibliography.)

[6] V. H. Hagopian, Ottoman-Turkish Conversation-Grammar 23; Heidelberg 1907.

[7] Gotthold Weil, Grammatik der Osmanisch-türkischen Sprache 3–4; Berlin 1917.

and sentence stress, neglecting, however, the musical accent. Collinder's criticism of Weil concerning the accentuation of *vali*, etc., (82) is justified, and I must corroborate Collinder's observations.

The author has taken great pains in stating the facts of accent in a truly scientific way. I am inclined to pronounce Turkish with less dynamic accent than he because the dialect of Istanbul is softer than the somewhat harsh and less musical speech of the natives of Brussa. Collinder himself realizes that his material is too limited for an exhaustive and systematic presentation, but he certainly offers much more than anybody before him. Some of his controversies with others are caused by a certain arbitrariness on both sides; compare for instance *évét* 'yes' (34). Bonelli[8] writes *évvet*. Collinder's assertion that *evet* is always pronounced with accent on both syllables is just as erroneous as Bonelli's transcription. Both of them pay no attention to the effect of sentence stress and of the linguistic situation. The word may be pronounced with level stress, or with accent on the first or the second syllable, depending a great deal on the kind of emotion which accompanies the communication between individuals.

There are many individual differences of intonation in every language, for which the phonetician must make due allowance in the interest of accuracy. In Turkish the two elements, stress and intonation, are very closely connected, very much as in English and in German (excepting certain dialects like Suabian). I believe, like the two excellent observers L. E. Armstrong and I. C. Ward,[9] that 'so close is the connection, indeed, that it is often difficult to decide whether stress or intonation or a combination of the two is responsible for certain effects.' On the other hand Collinder may have an advantage over English or German observers because in his mother tongue the difference between musical and dynamic accent is clearly noticeable.

There are very few typographical errors in the book. The German style is excellent. Only a few corrections need to be made.

KARL REUNING

[8] Luigi Bonelli, Del movimento dell' accento nel turco-osmanli. Roma, Reale Accademia dei Lincei, Classe di scienze morali, storiche e filologiche, Rendiconti, Serie Quinta. Vol. 2. 1893.

[9] Lilias E. Armstrong and Ida C. Ward, Handbook of English Intonation 3; Leipzig and Berlin 1926.

MICROFILM PUBLICATIONS

The following notices describe microfilm publications of interest to members of the Linguistic Society; they may be obtained from the American Documentation Institute (care Offices of Science Service, 2101 Constitution Avenue, Washington, D. C.) in microfilm (35 mm. standard safety photographic film, suited for enlargement to normal size on reading machines), at the prices here stated, or in enlarged photoprints, at a higher price. Remittance must accompany order, which should also state the reference number of the document.

The Nature and Growth of Language. Pp. 156. By L. E. HINKLE. Document 1159; price $1.00.

The work is divided into nineteen divisions, covering the following topics: Bodily Gesture, Origin of Speech, Writing, Nature of Speech, Phonetics, Semantics, Extension and Restriction of Meaning, Latent Meaning, Substitutions, Word Magic, Morphology, Borrowing, Coinage of Words, Social Aspects of Language, Linguistic Categories, Cultural and Racial Aspects of Language, Language Groups, Dictionaries.

Early Rhode Island Pronunciation (1636-1700) as Reflected in Published Town Records. Pp. 147. By CLAUDE SIMPSON. Document 1013; price $1.67.

A study of the phonology of 17th century Rhode Island speech, as revealed by occasional spellings in the published town records: Chapter I, Introductory (the settling of Rhode Island, the sources of Rhode Island speech, the materials, the interpretation of naïve spellings); II, Stressed vowels; III, Unstressed vowels; IV, Consonants; Index. The author's conclusion is that the speech reflected by the Rhode Island spellings is homogeneous, agreeing rather closely with Orbeck's Massachusetts English and with London English of the period.

NOTES AND PERSONALIA

THE FIFTH INTERNATIONAL CONGRESS OF LINGUISTS, which was to be held at Brussels August 28 to September 2, met with about 30 delegates present, who voted to postpone the Congress for one year, because of the threatening international situation.

THE TWENTY-SEVENTH INTERNATIONAL CONGRESS OF AMERICANISTS was held at Lima, Peru, on September 10 to 15, 1939. Sr. Dr. Don Jorge Basadre, Professor of the History of Peru and Director of the Central Library of the University of San Marcos, was Chairman of the Committee of Organization.

THE SECOND SPECIAL SUMMER MEETING OF THE SOCIETY was held successfully at Ann Arbor July 28 and 29, 1939. A vote was passed by those present, that it was the sense of the meeting that a Committee should be appointed by the President to consider the future of the Linguistic Institute. This action was approved by the Executive Committee, and the appointment of the Committee was ordered. The President named Franklin Edgerton, Chairman; Leonard Bloomfield, C. C. Fries, E. Adelaide Hahn, R. G. Kent, Hans Kurath, E. H. Sturtevant. A questionnaire has been sent out to all former members of the Linguistic Institute, asking their opinions on the past achievements of the Institute and its future policy, and from the answers the Chairman plans to draw up a report for use in proper quarters. To Professor Sturtevant has been entrusted the task of writing a brief history of the Institute.

CHARLES HALL GRANDGENT, Emeritus Professor of Romance Languages at Harvard University, and a member of the LINGUISTIC SOCIETY OF AMERICA from 1928 to 1937, died on September 11, 1939, at his home in Cambridge, Mass., in his seventy-seventh year.

He was born at Dorchester, Mass., November 14, 1862, and was a graduate of Harvard University, in later years receiving honorary degrees from the Universities of Chicago and Michigan and from Oberlin College. His entire teaching career, from 1886 to 1932, when he became emeritus, was at Harvard, except from 1889 to 1896, when he was director of modern language instruction in the public schools

of Boston; he was Exchange Professor in Paris 1915–6 and 1931. He was President of the LINGUISTIC SOCIETY OF AMERICA in 1929, and of the Modern Language Association of America in 1912, and was a member of many other learned societies in this country and in France and Italy, including corresponding membership in the Accademia della Crusca, the Accademia degli Arcadi, and the Académie de Toulouse. He was Chevalier de la Légion d'Honneur and Commendatore dell' Ordine della Corona d'Italia.

His writings were voluminous, including books of light essays as well as many volumes and articles on the Italian, French, and Provençal languages, Dante and his works, etc.; I think especially of his brief Italian Grammar (which introduced me to the practical knowledge of the language), his Introduction to Vulgar Latin (which has been translated into several languages), and his From Latin to Italian—for these are his volumes which have been most useful to me.

Yet great as were his scholarly achievements, those who were privileged to know him even slightly will remember him equally for his gentle and kindly human qualities.

<div align="right">ROLAND G. KENT</div>

HERMANN MEIER, Associate Professor of German in Drew University (Madison, N. J.), and a member of the LINGUISTIC SOCIETY OF AMERICA from 1931, died on April 21, 1939, at the age of fifty-two.

He was born in Nuremberg, Germany, and educated at the Universities of Wurzburg, Munich, and Berlin; he received the Ph.D. degree from the University of Marburg in 1930. Before this he had spent some years at Long Island University, in the German Department; and in 1930, on returning to this country, he went to Brothers College (now Drew University) as Instructor in German, becoming Assistant Professor in 1931 and Associate Professor in 1936. His teaching included not only German, but Spanish, English etymology, and elementary Greek. His great interest was in the relations of words to each other; he leaves, unpublished, the finished typescript of a large volume on The Word Families of the English Language, the fruit of years of study, which he had already used in a course which one student writes of as 'the most fascinating course that he had ever taken.'

He was known as an extraordinarily effective teacher of languages, a disciplined mind and cultured spirit, a true friend of his students; the President of his University says that 'his students and his colleagues will long remember him for his fine spirit and skill.'

<div align="right">ROLAND G. KENT</div>

Nathaniel Schmidt, Emeritus Professor of Semitic Languages and Oriental History at Cornell University, and a Foundation Member of the Linguistic Society of America, died at Ithaca on June 20, 1939, aged seventy-seven years, after a brief illness.

Born at Hudiksvall, Sweden, on May 22, 1862, he was educated at the University of Stockholm, Colgate University, and the University of Berlin. He was Professor of Semitic Languages and Literatures at Colgate University 1888 to 1896, then went to Cornell University as Professor of Semitic Languages and Oriental History, becoming Emeritus in 1932. He served as Director of the American School of Archaeology in Jerusalem, 1904–5; he was a member of the board of trustees of the American Schools of Oriental Research; he was president of the American Oriental Society 1931–2, and was a member of many other societies in this country and in Germany.

His writings on the Asiatic Near East, Egypt, and India, amount to over ten books, and countless articles in periodicals and encyclopaedias. His interests were theological and historical rather than purely linguistic, but he was none the less an interested follower of our work.

<div align="right">ROLAND G. KENT</div>

FREDERICK HENRY WILKENS, Professor of German in the Graduate School of New York University, and a Member of the LINGUISTIC SOCIETY OF AMERICA since 1931, died suddenly in Berlin on July 29, 1939, at the age of seventy-three years.

He was graduated from The Johns Hopkins University in 1884 with the degree of A.B., and received the Ph.D. from the University of Leipzig in 1891. After teaching at the University of Wisconsin, Union College, and Cornell University, he went to New York University in 1903, as Assistant Professor of German, becoming Associate Professor in 1907 and Professor in 1920. He had been designated Professor Emeritus as of September 1 of the present year.

His main scholarly interest was *Schallanalyse* or 'Sound Analysis', as a disciple of the late Professor Sievers of Leipzig. His demonstration of the subject will be remembered by many members of the LINGUISTIC SOCIETY who attended the Society's meeting at New Haven in 1932.

<div align="right">ROLAND G. KENT</div>

JAMES PYLE WICKERSHAM CRAWFORD, Professor of Romanic Languages and Literature in the University of Pennsylvania, and a Foundation Member of the LINGUISTIC SOCIETY OF AMERICA, died on September 22, 1939, at his home in Philadelphia, in his fifty-eighth year.

He was born at Lancaster, Pa., on February 19, 1882, and received the A.B. degree from the University of Pennsylvania in 1902. His graduate work was done at the same institution and at the Universities of Grenoble, Madrid, and Freiburg (Germany), and in 1906 he received the Ph.D. from the University of Pennsylvania, with which he was associated ever thereafter, at first as Instructor in Romance Languages, then as Assistant Professor, and from 1914 as Professor. In this university career there was one interlude: in June 1918 he was appointed Captain in the United States Army, and after duty in Washington was sent as Military Attaché to the Republic of Colombia; he received his honorable discharge in August 1919, and soon thereafter was appointed Major in the Officers Reserve Corps. He was the author of a number of volumes on Spanish literature, as well as of several standard textbooks for the teaching of the same language; he contributed countless articles on Spanish, Italian, and French topics, to the scientific periodicals; he was editor of the Modern Language Review 1920-4 and founder of the Hispanic Review, which he edited from its appearance in 1933 until his death. He belonged to many scholarly organizations, and was corresponding member of the Real Academia Española and of academies in Cadiz and Valladolid. As teacher, as administrator, as research worker he was equally gifted, and worked prodigiously in these and other ways in the service of his University. An illness which befell him in 1931 he resisted heroically, and again conducted his graduate courses until the end of the last academic year. Only a few days after returning from England, where he had spent the summer, he was stricken, and died two days later.

A man of abounding energy and enthusiasm, and of genial human sympathies, he attracted, both at his own institution and elsewhere, the devoted affection of an extraordinarily wide circle of friends, who will deeply miss him.

ROLAND G. KENT

WALTER PETERSEN, Assistant Professor of Linguistics in the University of Chicago, and a Signer of the Call which led to the formation of the LINGUISTIC SOCIETY OF AMERICA, died on October 3, 1939, in Chicago, in his fifty-ninth year.

He was born in Glueckstadt, Germany, on January 24, 1881, and received the degrees of A.B. from Grand Island College in 1900, A.M. from the University of Nebraska in 1901, and Ph.D. from Yale University in 1908. After teaching at Hastings College, the University of

Syracuse, Bethany College, Westminster College, Redlands College, and the University of Florida, he was in 1929 called to the University of Chicago, where he spent the remainder of his career. He wrote many articles on Greek and Latin linguistics, and on phases of general Indo-European; in recent years he dealt extensively with Hittite.

An Apology

During his illness, at some time before August, 1938, my colleague Edward Sapir asked me to transmit to the editors of the American Journal of Philology a manuscript on Indo-European Prevocalic *s* in Macedonian. This I did; whether or not I read it I cannot now remember. The article was accepted for publication; and it has now appeared (AJP 60.4.463–5, for October 1939; distributed in September).

After Sapir's death several manuscripts in his handwriting were handed to me to be published. Among them was the paper already referred to. I did not realize that I had ever seen it before, and I sent it to the Editor of Language, who has now published it (Lang. 15.3.178–80, for July-September 1939; distributed in September).

I am very sorry that my carelessness and poor memory has caused this duplication. Neither editor is to blame.

E. H. Sturtevant

Dr. George C. S. Adams has gone to Tusculum College, Greeneville, Tenn., in the French Department.

Dr. George Bechtel has gone to Judson College, Marion, Ala., as Associate Professor of Latin.

Dr. S. I. Hayakawa has gone from the University of Wisconsin to the Armour Institute of Technology, Chicago, in the Department of Language and Literature.

Dr. Henning Larsen, of the State University of Iowa, has gone to the University of Illinois, as Professor of English.

Dr. Sanford B. Meech, of the Armour Institute of Technology, has gone to Syracuse University as Visiting Associate Professor of English.

Dr. George Nordmeyer, of West Virginia University, has gone to Yale University as Instructor in German.

J. Richard Reid has gone from Syracuse University to Harvard University as Instructor in French.

Joseph K. Yamagiwa, of the University of Michigan, has gone to Japan to pursue researches in the Japanese Language and Literature.

DR. HORACE I. POLEMAN, of the Library of Congress, has gone to India to survey educational facilities, and make collections for the Library of Congress.

DR. ALLEN WALKER READ, who as Guggenheim Fellow has been in London working on a Dictionary of Briticisms, has returned to this country because of war conditions, and will continue his work here. Similarly, DR. ZELLIG S. HARRIS, who also was Guggenheim Fellow and was to work in Palestine on a history of Hebrew as a revived modern vernacular, has returned from Europe, and DR. ISIDORE DYEN, who as Fellow of the American Council of Learned Societies was to pursue advanced studies at Paris and elsewhere in the Balto-Slavic languages, has remained in this country. Both will continue their studies here.

DR. FANG-KUEI LI, who has been Visiting Professor of Chinese at Yale University, has returned to his permanent post in the Institute of History and Philology, now situated at Yunnanfu, China.

THE FOLLOWING NEW MEMBERS FOR 1939 have been received into the LINGUISTIC SOCIETY since the last published list, and up to September 16, 1939:

George Bond, M.A., Instructor in English, Southern Methodist University, Dallas, Tex.; *phonology.*

Yuen Ren Chao, Ph.C., Yale University, New Haven, Conn.; *Chinese.*

Wallace Herbert Magoon, M.A., Instructor in English Composition, Michigan State Normal College; 1008 Brooks St., Ann Arbor, Mich.; *Greek and Latin etymology.*

Eugene A. Nida, M.A., Professor of Morphology and Syntax, Summer Institute of Linguistics, Siloam Springs, Ark.; Garden Grove, Calif.; *American Indian languages.*

L. R. Palmer, Ph.D., Lecturer in Classics, University of Manchester; Downham, East Downs Road, Bowdon, Cheshire, England.

Frank G. Ryder, M.A., Teaching Fellow in German, 306 South Wing, University of Michigan, Ann Arbor, Mich.

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